SUPPLY CHAIN MANAGEMENT AND REVERSE LOGISTICS

(An Overview and Review for Future Research Direction)

Ilyas Masudin

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Penerbit Universitas Muhammadiyah Malang

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After a long journey, now this book is the conclusion of a process. The completion of the book would not have happened without the support of many individuals.
I dedicate this book to my wife and my son
and all my students.

Preface

The study of logistics and supply chain management become a trending topic recently. Researcher and practitioners have been working to elaborate the concept, strategy, framework and application of logistics and supply chain management in industrial operations. Thus, the competition is not between firms any more but it is all about logistics and supply chain management strategy competition. The progress of world wide regulations and law, global completion, the increasing demand from customers in social and environmental considerations and the sustainability issues has forced researchers and industrial practitioners to expand the perspective on beyond logistics and supply chain management concept. Reverse logistics and green supply chain management are such the innovative ideas for researcher to discuss and for industry practitioners to adopt. This book attempts to describe the concept of supply chain management and logistics in traditional system and figure out the progress of green supply chain management and reverse logistics study. The first two chapters of this book overviews the concept of supply chain management in both perspective application of strategic and operational levels based supply chain management's business process and supply chain management elements. The last two chapters of this book give more attention on these areas: green supply chain management and reverse logistics specifically on the previous study has been done by researchers. The overview and review of green supply chain management and reverse logistics in this book would help readers to understand more about the concept of logistics and supply chain management and would give new directions of further research in green supply chain management and reverse logistics.

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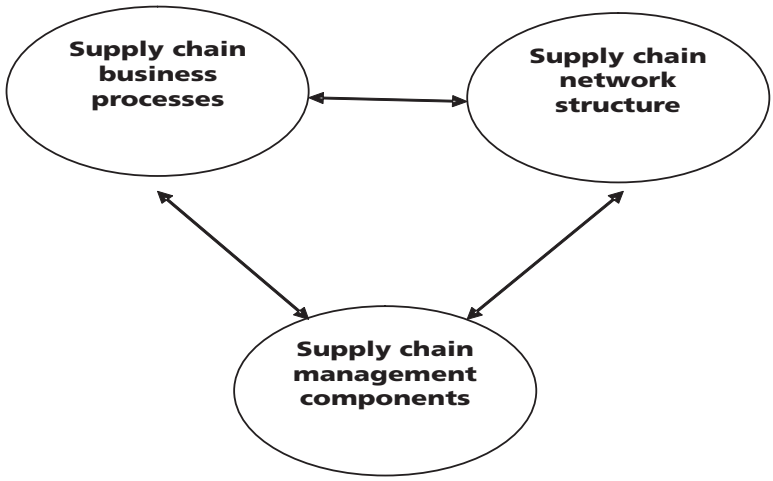
Supply Chain Management: an Overview

Introduction

The Council of Logistics management defined logistics management as the activities of movement of goods from the "*point of origin*" to the "*point of consumption*" in effective way in regards to satisfy customer's demand. The most popular area in logistics is Supply Chain Management (SCM) which is defined as the process of planning, implementing and controlling all activities involved such as material or product movement, storage of materials, work-in-process inventory and finished product from supplier to end customer (Simchi-Levi, Kaminsky, & Simchi-Levi, 2008, p. 1). La Londe and Masters (1994) proposed the definition of supply chain management is a set of interdependent firms that pass raw material forward, manufacturing materials into final products and place it to end users along the supply chain which could be assemblers, warehousing, wholesalers, retailers and transportation providers. The same definition of supply chain management has been also made by Lu (2011) who defines SCM as a group of inter-connected organizations that work together to transform input from the point of origin (source) by adding value to the end products that are demanded by targeted customers, while Lambert, Stock, and Ellram (1998) defined supply chain management the alignment of organisations or firms that create products or service and bring them to market.

In those definitions, there are some points of supply chain characteristics that have been used to define supply chain management, such as 1). Supply chain management is concerned with more than one participant or company, 2). The participating companies are interconnected and work together for the same mission although along the supply chain, they do not belong to the same business, 3). The inter-connected companies have the same commitment to add value along the chain stream from their source of origin to end consumers. Thomas and griffin (1996) define supply chain management as the management of material and information flows between facilities along the channel of supply such as suppliers, vendors, manufacturing plants, assembly plants, warehouse facilities, distribution centres and retailers. Moreover, supply chain is also defined as the integration and coordination of "*key business processes*" from suppliers to end-users through the channel of distribution by adding value in regard to provide products or service to customers (D. Lambert, M & Stock, 2001, p. 55). In term of managing and integrating supply chain management business processes across the supply chain, Lambert & Cooper (2000) developed an essential SCM framework which indicates that there some common management components across business processes and members of the supply chain. The supply chain management framework determines how the business processes and members of the supply chain are managed and structured. Lambert, Cooper and Pagh (1998) modelled a supply chain management framework that emphasised the inter-related SCM nature and the need to proceed or design and the successful supply chain management. The SCM framework consists of three inter-dependent elements such as supply chain business processes, supply chain network structure and supply chain management components (see figure 1).



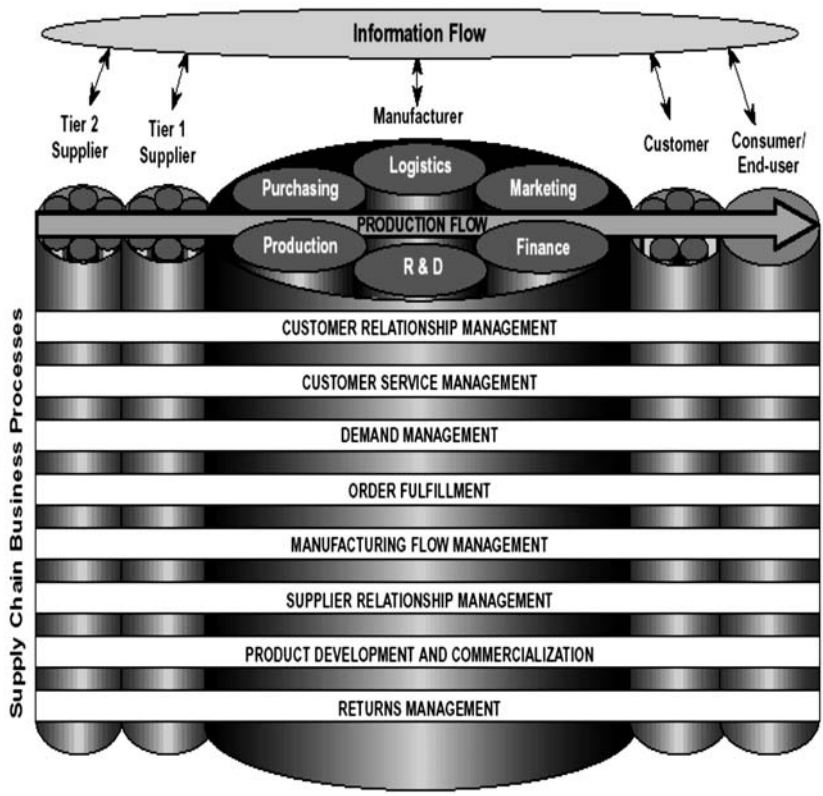
Source: Lambert et al. (1998)

Figure 1 Supply chain management framework

Supply chain framework which integrates three elements as shown in Figure 1 has been explained well by Lambert and Cooper (2000) in their study. In their SCM framework, it is figured out that there are certain and common essential management components across all business processes that need to be integrated and managed, thus these components must be paid attention by management. There are eight key business processes that make up the core of supply chain management according to Lambert and Cooper (2000), they are:

- Customer Relationship Management
- Customer Service Management
- Demand Management
- Order Fulfillment
- Manufacturing Flow Management
- Procurement
- Product Development and Commercialization
- Returns management

Figure 2 shows that there are eight keys business processes that run along the chain of supply from the initial suppliers trough end consumers and cut across the cross-functional silo which is exist in every firm. The functional silo of the firm includes logistics, marketing, finance, research and development, production and purchasing. Croxton, García-Dastugue, Lambert, & Rogers (2001) designed the relative importance of each eight keys of business processes and specific activities that need to be considered for management of each supply chain. The designs are developed for the perspective of the middle firms which are involved in a supply chain and interfaced them based on the strategic and operational processes.

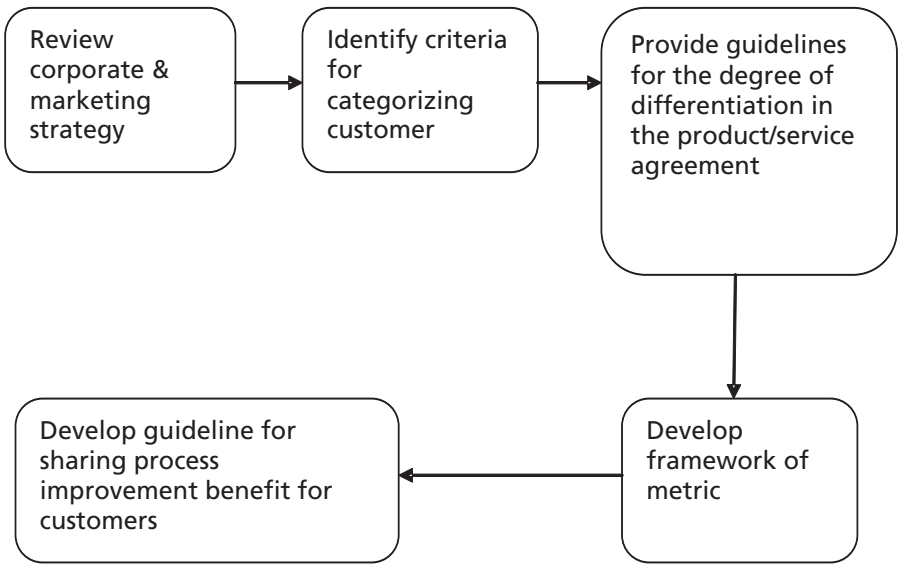


Taken from Lambert et al. (1998)

Figure 2 Supply chain management: integrating and managing business processes across the supply chain

Customer Relationship Management

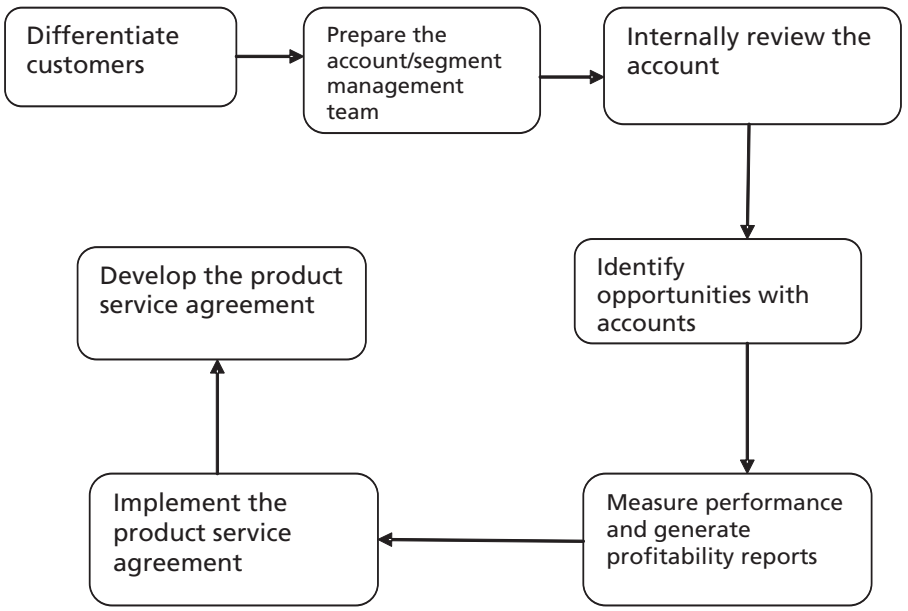
Customer relationship management (CRM) is related to business to customer (B2C) and business to business (B2B) relationship. All aspects about the interactions between these two stakeholders (company and customers) are involved in CRM. Croxton et al. (2001) stated that CRM is the process that would provide the structure how the relationship between company and customers are created and maintained. At the strategic level, customer relationship management processes start with the process of reviewing organization's goal in current and in the future to identify customer's segment. The next step is categorizing customers, who will be offered standard product and service agreement (PSA), into segments based on the specific criteria. Croxton et al.(2001) proposed criteria that can be considered in categorizing customers such as profitability, growth potential, competitive positioning issues, access to market knowledge, market share goals, margin level, level of technology, resources and capabilities, compatibility of strategies and channel of distribution. The third step is known as customization, where the team develops the potential differentiation of product service agreement (PSA) that leads potential implication in firm's profitability and costs. The next process is developing framework of metrics.



adopted from Croxton et al. (2001)

Figure 3 Strategic processes for customer relationship management

Supply chain metrics measures how well the key business processes have been performed and how the supply chain's customers are satisfied effectively. The metrics should not only measure the internal logistics performance such as lead time, fill rate and on time performance but also measure the firm's external performance such as early tiers of supplier performance, customers, third party providers and other external stakeholders across the supply chain (M. D. Lambert & Pohlen, 2001). Finally, the last process is developing guidelines in order to share the benefits that both firms and customers gained from the developed processes improvements.



adopted from Croxton et al. (2001)

Figure 4 Operational processes for customer relationship management

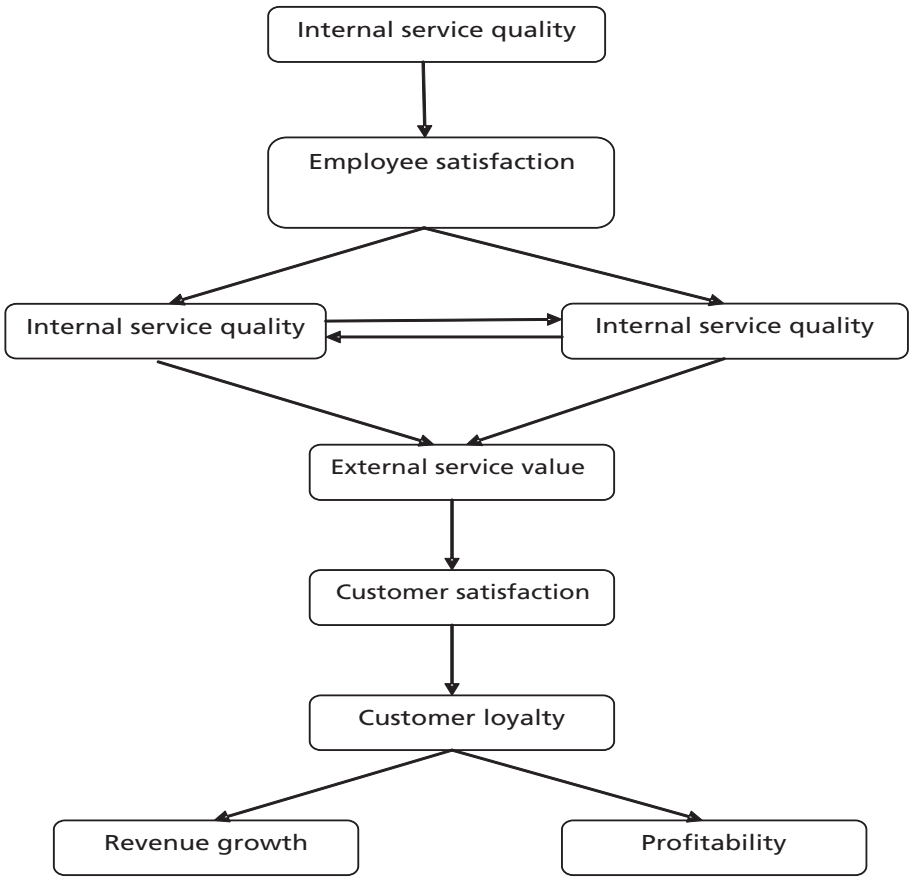
Customer relationship management processes in operational level deals with the implementation of processes developed at strategic level. Determined customer segments at strategic level will be followed up by forming management team including the salesperson in charge (SIC) from different functional areas (Croxton et al., 2001). Periodically, the management team has to develop and manage PSA for customers segments. Each management team should make a review the performance based on the metrics stated in strategic processes such as purchased products, growth of sales and also the firm's position in the market. The review could raise the opportunities and challenges for further customer relationship management improvement.

Customer Service Management

Customer service management (CSM) is related to the process provided by organization for their customers to get any information regarding the products or service such as the availability of the products, delivery dates, customers' order status and any complaints for the purchased products. In the supply chain management perspective, for better customer's service performance, the process of CSM should be real-time and up to date information between customers and firms, therefore the interface connection between the function of supply chain and customers. The interfaced functions along the supply chain should provide services based on customers questions or complaints such as the function of manufacturing, logistics and distribution processes. Scott, Lundgren, & Thompson (2011) stated that an advanced customer service management could be the key components of competitive advantage for supply chain businesses. It means that the quality customer's service management has positive relationship into firm's profit. There are two types of customers that need to be quality treated as customers: internal and external customers. The internal service quality is about treating quality service for internal customer (employees). Providing an excellent service for employees as core customers could tend to improve employees' productivity, loyalty (stay longer in the firm) and quality care commitment. After treating a quality service for internal customers, it automatically drives employees to provide a greater quality service for the external customers. Those two aspects of quality service for internal and external customers can build customers satisfaction and loyalty that can accelerate greater revenue growth and profitability.

Internal customers service quality (employee) and external customers play significant role on the chain of service processes. The service profit chain (profit and growth) for organizations is resulted from customer loyalty that is generated by customer

satisfaction (Heskett, Sasser, & Schlesinger, 1997). Figure 5 describes the chain of service profit developed by Heskett et al (1997). It is indicated that there is relationship between the management of customer service and organizations growth and profitability. In the perspective of supply chain, this relationship might have greater implications due to the interconnection of stakeholders involved in the chain of supply. Management in strategic level should implement product and service agreement (PSA) developed previously in each level of supply chain to provide the right information to customers from the right and direct sources.



source: Heskett & Sasser Jr (2010)

Figure 5 Service profit chain

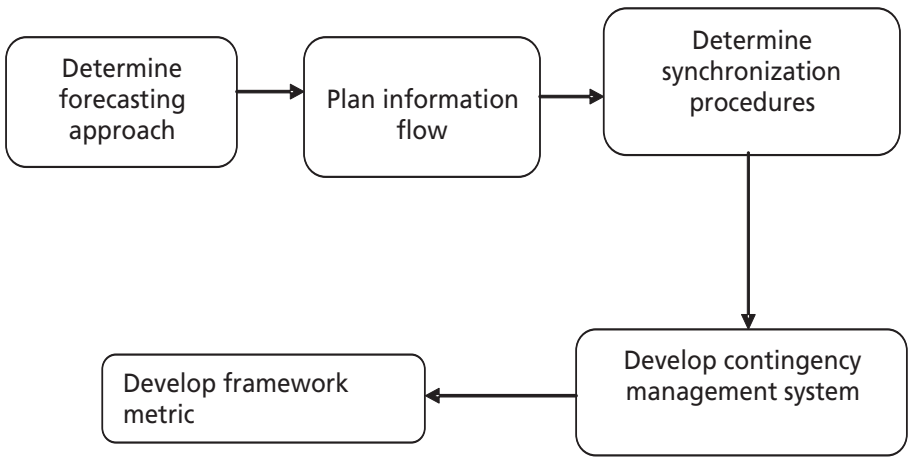
In operational level, customer service management team is responsible to response every event both internal and external events. The team should understand in detail of the process of customer service processes within organization to avoid the trivial actions. Therefore, coordination among processes within organization in term of customer service management is essential. This coordination requires an intensive interfaces with other business processes owners or managers because it sometimes requires quick and actual response to events that can be only done by managers and owners to execute (Croxton, 2001).

The final process that should be responsible by strategic level management is determining the metrics to evaluate and monitor the application of customer service management. The objective is to make sure that all events regarding customers service is met with the metric of customer's service measurement, which is provided in product and service agreement (PSA). Strategic level management should also response the summary of resolved problems of customer service provided by operational level management to monitor and evaluate the performance of service.

Demand Management

Demand management is the main key in supply chain management components because business processes of the organizations starts from this components. In supply chain perspective, demand management is a trigger in supply and demand activities along the supply chain network. Poor demand management would result serious inefficient problems in inventory, distribution, production and purchasing processes in all channels along the supply chain. Thus, forecasting

activities; the initial important step of demand management; should be done precisely by strategic level of management. The first forecasting activity is determining the method to forecast demand for future which correlated with historic data source provided such as historic demand data, sales projection, promotion plans, market share and inventory projection. (Croxton et al., 2001). The steps for demand management processes for strategic level team are described as follow:



source: Heskett & Sasser Jr (2010)

Figure 6 demand management processes for strategic level team

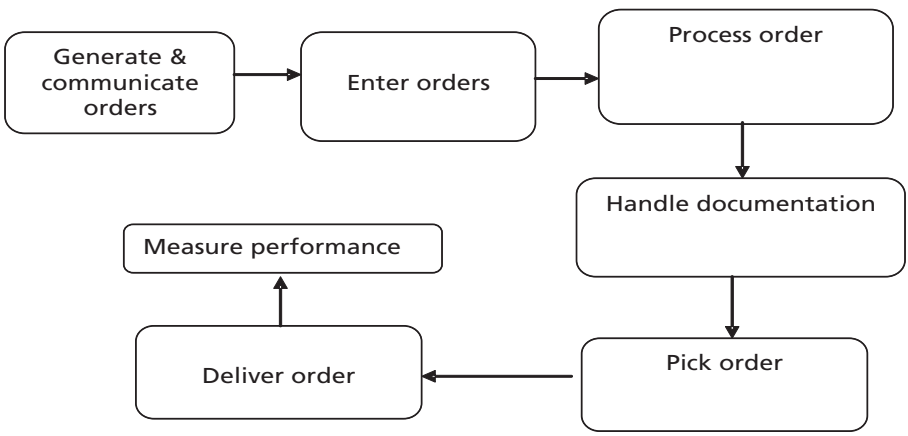
Once the approach of demand forecasting is determined, management level has to plan the information flow of projected demand to other functions of organizations in the supply chain management silos both upper and downer stream of the silo such as customer relationship management and customer service management; and also order fulfilments,

supplier relation management, product development and commercialisations and return management. The next process is synchronization, which is required to match the forecasted demand with other processes especially with capacity and the flexibility of the processes to meet the forecasted demand. Manufacturing processes, warehousing and distribution system are the sections of the firms that is the most affected by demand management. In the perspective of supply chain management, capacity and flexibility of facilities along the chain of supply both direct and indirect chains should be also informed clearly.

The next process of demand management done by strategic level team is contingency management system. This step is important in term of imperfect conditions as results of inaccuracy demand forecasting. The disruptions such as bottlenecking, late delivery, low response on customer demand and low order fulfilment might occur due to capacity and flexibility problems caused by inaccurate or unexpected demand forecasting. In the perspective of supply chain, the disruptions can result worst problems along the chain of supply from interrelated direct and indirect members to other providers. Thus, management team of firm's strategic level should have contingency management system as alternative solutions to solve those disruptions. The final step of demand management processes done by strategic level is developing the metric framework to measure the accuracy of demand forecasting. The aim is to monitor and evaluate the performance of the whole processes along the supply chain regarding the implications of forecasted demand. The metric should include capacity utilizations along the chain of supply and also measure the customer relationship management to guarantee that it is still in the standard of service level required.

Order Fulfilment

Recently, the responsive order fulfilment processes become a key business processes in most organizations. As the price and the quality of proposed product by customers are similar, then responsive order fulfilment from the firms is the consideration in deciding to buy their products. Thus, Kritchanchai & MacCarthy (1999) believed that responsive order fulfilment is the main reason in achieving and maintaining competitiveness of the firm's customer satisfaction. In general speaking, order fulfilment is related with operational processes in term of meeting customer demand. Therefore, in this section we are discussing the process of order fulfilment in the level of operational management. Croxton et al.(2001) identified the process of fulfilling customer orders for operational management level based on how customers place their orders such as generated and communicated, entered, processed, documented, picked, delivered and handle post delivery. Figure 7 shows the steps in responding the customer orders:



adopted from Croxton et al. (2001)

Figure 7 Process of fulfilling customer orders for operational management level

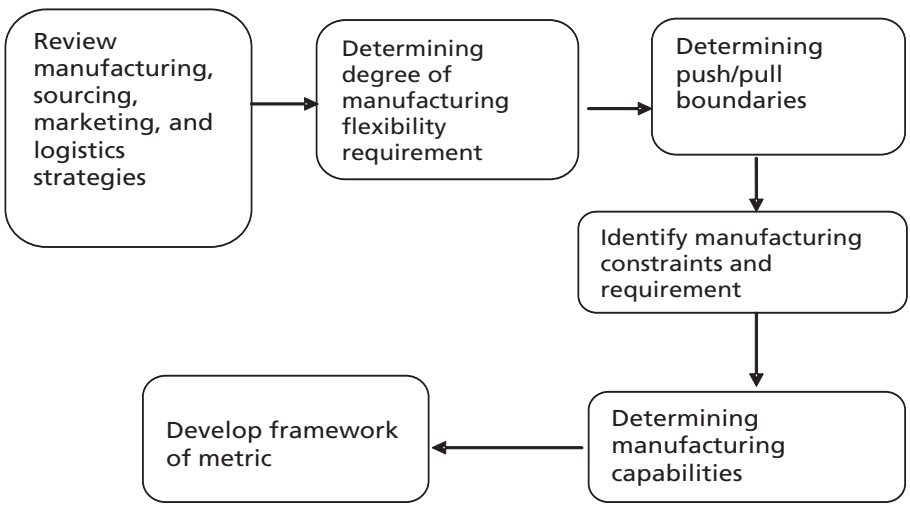
The first process of order fulfilment is as the orders are generated and coming to customer service management team and demand management team, then the orders are transmitted to a team of order fulfilment to enter the orders in the system to check the demand, inventory status and the cash flow status of customers' credit. As all the status are fixed then the orders should be placed by informing other divisions such as manufacturing, warehousing or distribution sections to proceed the orders. The next step of order fulfilment processes in the operational management level is preparing some documentation of pre-delivery activities such as bill and invoice and instruction of products. At order picking process, some activities regarding picking and packing merchandise/products and loading the products to the containers or transporter should be responsible for order fulfilment management team. The final step is delivery and post delivery processes, which concern with preparing shipping documents, transmitting information about delivery and transportation costs (transport bills) as well as the information of delivery status to customers and customer service management team should be done by order fulfilment team. Then, feedback and evaluation of regarding delivery status, payment status or any returns and complaints of the delivered products from customers are required to be reported by the team to other related management team such as return management, customer service management team and customer relationship management team.

Manufacturing Management Flow

In traditional manufacturing flow, production is done as the number of products (batch) so the time spent in product waiting for machining is too long and the unproductive utilization of facilities (machines) and man power is often occurred. In the modern manufacturing flow, production process is done not

based on the batch of the products but more based on the market driven that manufacturing flow is based on the real demand. Motwani & Mohamed (2002) defined modern manufacturing flow is pull-driven manufacturing strategy in which the main point is that daily production rate can be synchronized with fluctuated demand by sequencing items in properly and arranging production capacity. As the consequences, inventory will be kept in minimum number because materials or products are made based on the demand, the replenishment of materials by suppliers is based on use and cycle time between order and delivery time will be low.

In the perspective of supply chain management, the responsibility in managing flow of manufacturing based on the level of scope of decisions are strategic level management and operational level management. The steps of manufacturing flow management processes for strategic and operational teams is describes respectively in the following figures:

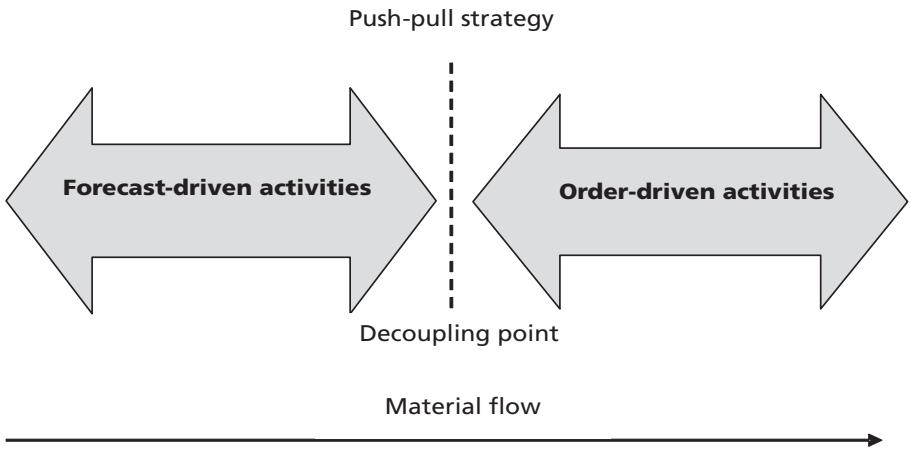


Adopted from Croxton et al. (2001)

Figure 8 steps of manufacturing flow processes for strategic level

The first of process of manufacturing management flow is reviewing manufacturing, sourcing, and marketing and logistics strategies. This step is correlated with other interfaces such as marketing, customer relationship management and logistics department. Top management should review the long term targeted production, current and projected sourcing of materials, proposed in bound and outbound logistics applied by the firm before coming to the next step. Currently, the firm also considers environmental factors in that should be involved in the review by strategic management team. The next process of manufacturing management flow is determining the flexibility of manufacturing process. This second process translates the requirements of the review's results in the first step in term of manufacturing flexibility and supply chain requirements (Croxton et al., 2001). The strategy of man power (labour) recruitments, which could be out sourced or recruited by firm is also done by strategic management team in this step. Other strategy related to manufacturing flexibility in term of supplier selection and the projected capacity growths are the other jobs by strategic team. The next process is determining push pull boundaries along the supply chain. It is related with manufacturing strategies in each facility channel along the flow of manufacturing. Make to order and make to stock are formally the strategies in manufacturing process that should be decided to use by management level. Croxton et al.(2001) stated that the boundaries of pull-push strategies will help management level to determine "*the stocking point in the supply chain for servicing manufacturing facilities, distribution centres and customers*". The concept of pull push boundary is known as decoupling strategy where there are areas of supply chain should be bounded to differentiate the activity manufacturing process. Those areas are 1). manufacturing activities which are driven by forecast results and 2).

manufacturing activities which are driven by order (Ng & Chung, 2009). The concept of decoupling strategy in manufacturing activities is figured out by the following figure:



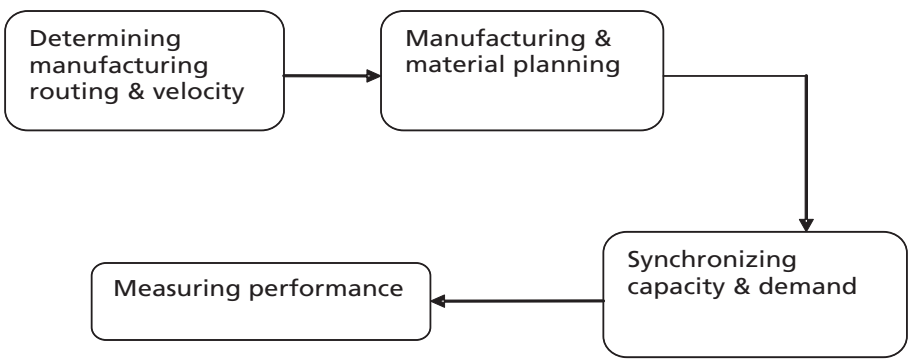
Adopted from Ng & Chung (2009)

Figure 9 the concept of decoupling strategy

From figure 9 shows that activities based on order-driven is generally for downstream supply chain such as distributors, retailers and customers. This fully customer demand-driven that the stocks should be minimum due to the number of goods or products are numerous, while lower number of goods or products are in upper stream supply chain such as supplier, principals and manufacturers should apply forecast-driven strategy. For the company that have large and long supply chain this system would be very fuzzy and complicated especially to balance between real customer demand and forecast demand. Therefore, the firm require decoupling point as stocking point (buffer stock) to anticipate the unbalanced forecast-demand.

The final steps should be tackled by strategic management level are determining the capability of the supply chain. Croxton et al.(2001) stated that this process is concerning with supplier development strategy as well as the strategy of supplier selection and supplier relationship strategies. Top management should identify the constraints of the required capability of the supply chain and communicate with existing suppliers; also it must be considerations to select appropriate suppliers and determining the contract strategy with suppliers which could be short, medium or long term-contract.

Manufacturing management flow in operational processes, it is purely operational activities that have the objective to plan material and manufacturing flow in short term process. Figure 9 shows the processes of manufacturing management flow by operational team level: The first process of manufacturing management flow is determining manufacturing routing and velocity, where master production plan (MPS) is developed from demand management. The sequencing and velocity of manufacturing goods will impact of the material requirement planning of materials from suppliers which is done in the next step (Croxton et al., 2001).



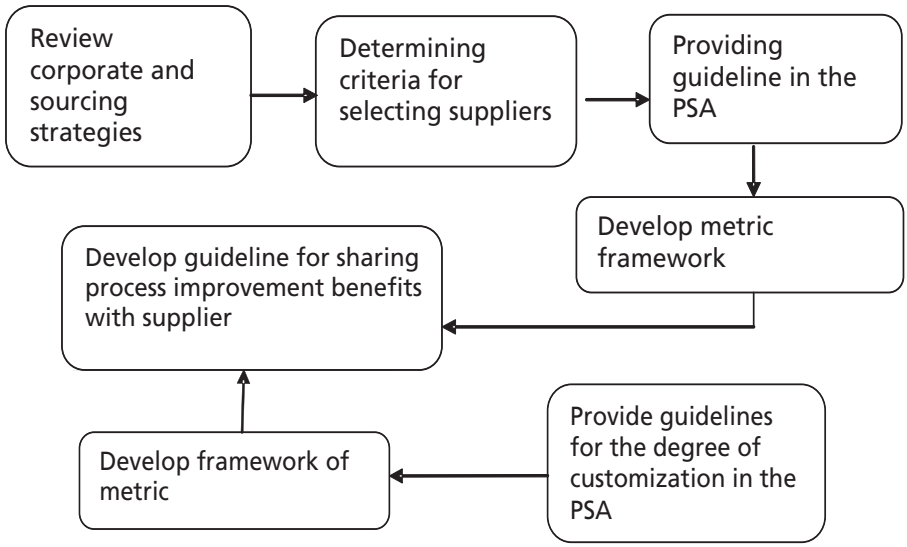
Adopted from Croxton et al. (2001)

Figure 10 process of manufacturing management flow by operational team

After developing production plan for short and middle term, the team needs to synchronize capacity on production floor and determine the number of stocks along the supply chain members as well as the raw materials, work in process and other sub components.

Supplier Relationship Management

Supplier relationship management is about managing the relationship between the organizations and appropriate suppliers in regards to provide better customer responsiveness. The relationship is not just selecting the appropriate suppliers based on the requirements but also determining how the relationship should be provided and maintained in different time horizon. In the supply chain perspective, this relationship is known as buyer-supplier relationship. Positive interaction between buyer and supplier can improve supply chain performance. In general speaking, the responsibility in developing and maintaining the business of supplier relationship management is done by strategic management level. They should focus on how the developed PSA (product and service agreement) can be met by potential suppliers. The process of supplier relationship management can be shown on the following figure:



Adopted from Croxton et al. (2001)

Figure 11 the processes in supplier relation management in strategic level

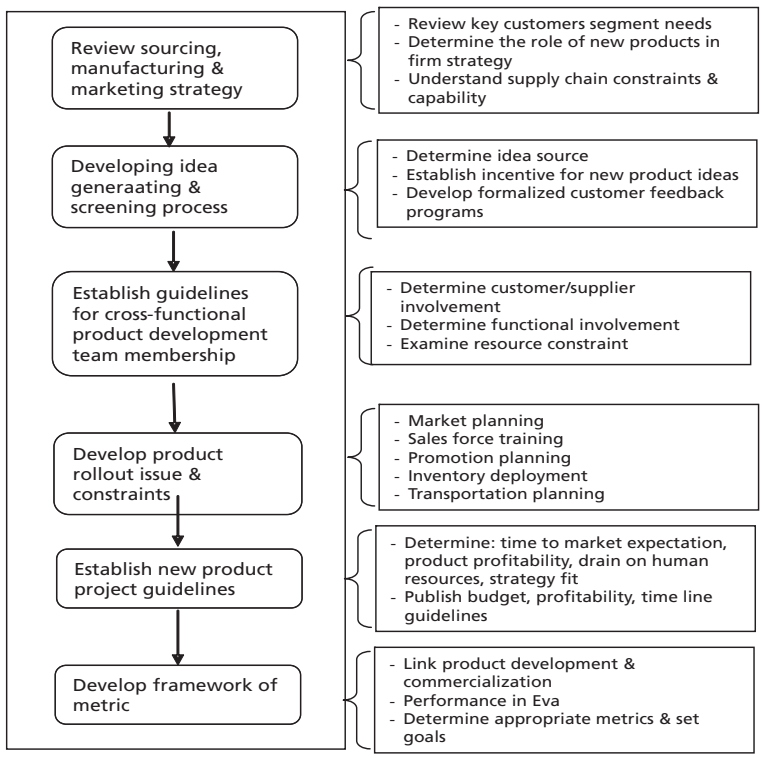
The processes of supplier relationship management start with review of corporate strategy in sourcing. The review of sourcing strategy includes the decisions of using single or multi suppliers along the supply chain channels local or global sourcing strategy and sustainable sourcing strategy. For sustainable sourcing strategy, the review should consider corporate responsibility in social and environmental from the behaviour of their suppliers in supplying their business. In term of the contribution to corporate, there are three strategies of sustainable sourcing strategy that has been identified in Akhavan & Beckmann (2016) such as 1). reducing the complexity of sourcing and supply management, 2). differentiating sustainable sourcing and supply management and 3). reviewing sourcing profile. The review also includes projected business life cycle that influence to use single or multi suppliers for the business. In this case, the benefits and risk analysis as the

firm using single or multi suppliers should be done by top management level to decide. The analysis should not only review the potential saving of sourcing costs (financial benefits) when using single supplier but also the risks when using single sourcing for the business.

The next process is determining criteria for selecting suppliers. After reviewing the goal of corporate strategy in sourcing, then determining criteria in selecting supplier is the next process need to be developed by management team. This strategic decision is crucial process that influences corporate competitive advantage. The use of multiple criteria is commonly used to select available suppliers such as price, quality, service and reputation of the suppliers are the major criteria in selecting supplier, however social and environmental sustainability factors are also included recently as the structure of criteria in selecting or evaluating suppliers. Other important thing in this phase is determining the boundary of customization as developing criteria from alternative supplier if required. Therefore, PSA (product and service agreement) must be written in each supplier segment of supply chain to allow customization level of supply. Some supplier in different level of supply chain might have different degree of customization agreement that requires different PSA. This sometimes requires communication between firm and suppliers because the customization requires guidelines for suppliers to meet the PSA standard. The guideline should include the detail specification of requirement and the allowance of standard and penalty or compensations regarding customization. The final process is evaluating sourcing strategies that have been done by developing metric framework. This evaluation may impact on the progress of relationship with supplier as the evaluation measures the benefits (profit), costs and value added through supply chain for both parties: firms and suppliers.

Product Development and Commercialization

The development of product is important for corporate success. New product development (NPD) is complete processes in bringing new product to market. A good product development should consider customer needs and factors drive the needs of customer for the products such as cost, quality, time and the nature of market. The process of product development, process is responsible by operations manager (strategic management level) because this decision is associated with "what shall we make?" that is long term decisions and requiring investment and strategic planning to support. The sequencing processes of product development and commercialization consist of six stages as follow:



Adopted from Croxton et al. (2001) & Lambert (2008)

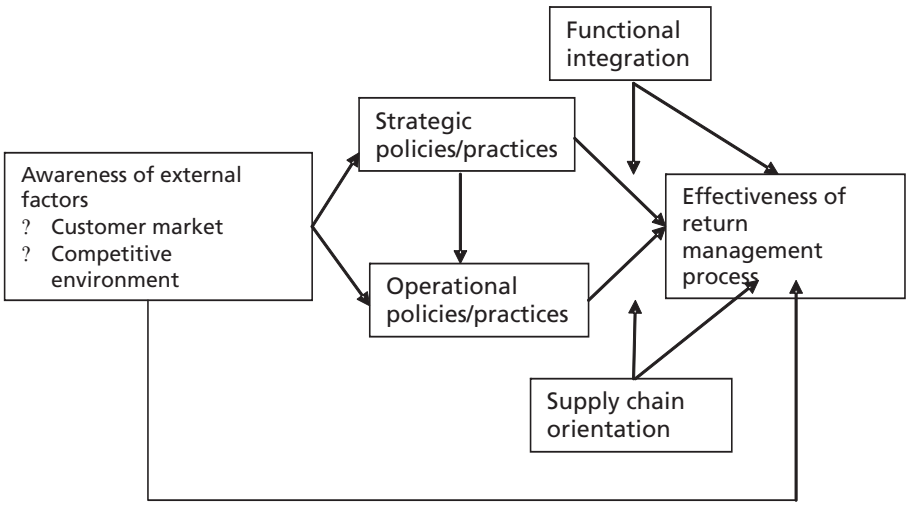
Figure 12 Product development and commercialization processes

The objectives of strategic process of product development and commercialization; which is responsible by strategic management team; are to provide a formal standard structure for other departments to execute operational processes and construct a blueprint for implementation (D. M. Lambert, 2008). The activities of product development and commercialization that is shown by Figure 12 indicates that strategic level management should integrate other functional management for each sub processes. For instance, for the process of developing product roll out issue and constraint, the strategic level management team should have an intend communication with some cross functional team such as marketing and logistics functional team. This cross functional integration guidelines between each functional area and strategic level team should be developed and formalized by strategic management level. This step is crucial because the strategic level team must define the right functional team on their product development and commercialization processes.

Return Management

Management of return is "*the supply chain management process by which activities associated with returns, reverse logistics, gate keeping, and avoidance are managed within the firm and across key members of the supply chain*" (Rogers, Lambert, Croxton, & García-Dastugue, 2002). The activities in this process is not only monitoring and managing the reverse flow of money along the supply chain, but also identify the potential saving from unnecessary costs. Even though return management is not the most prioritised activity in most firms but an effective return management is an important supply chain management process that enables top management to

determine productivity improvement opportunity. Mollenkopf, Russo, & Frankel (2007) developed a causal model for an effective return management processes that explains the nature of relationship between functional areas need to be integrated.



Adopted from Mollenkopf et al. (2007)

Figure 13 causal model for return management process

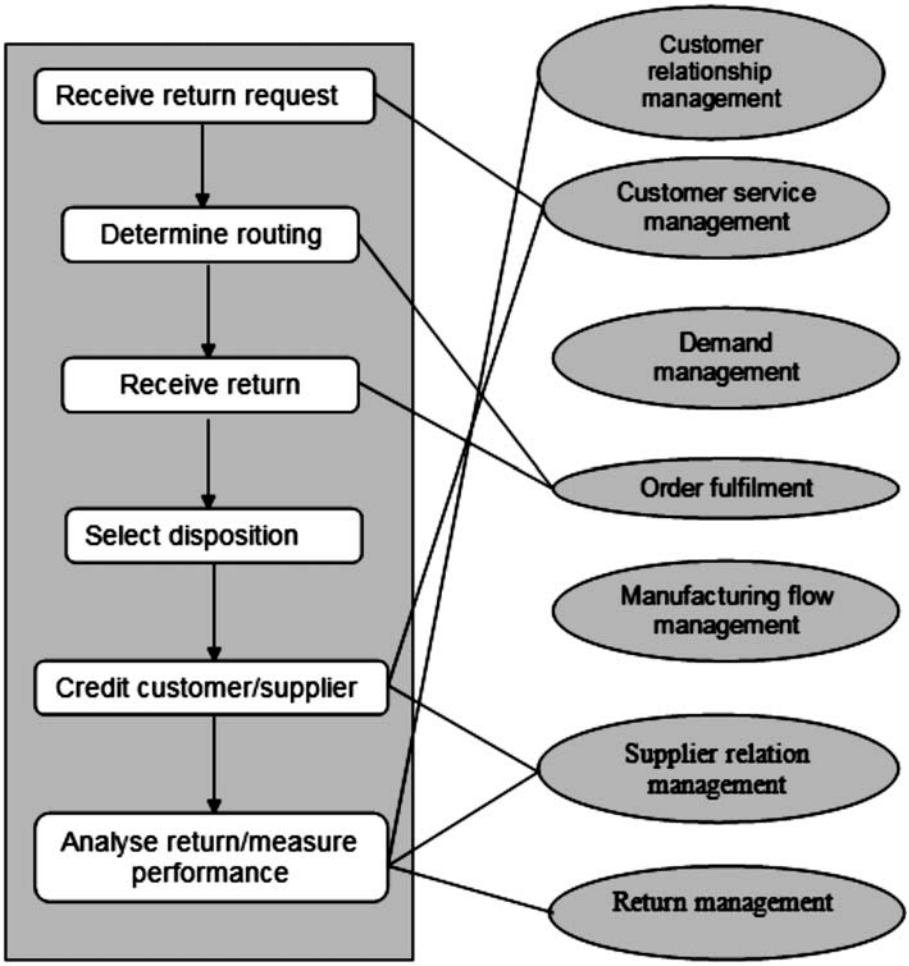
Some influencing external factors which are the triggers why corporate is evaluating their return management or developing an effective return management such as customer market, competitive environment and regulatory environment. Strategic level management should consider and respond these external factors in the process of reviewing environmental and legal compliance guidelines. Identification of the real or direct customers of the firms is important. Some organization have direct customers differently, most of them have retailers as their direct customers. This will influence the strategy of return

comparing with managing return with end-customers as direct customers. Strategic level team should also review global competitive regulation in their return management consideration. The turbulence of global competitive regulation influence significantly for most global firms which uses global supply chain, for instance the pressure to reduce production costs tends most firms to outsource their logistics activities in China and India that lead complexity in supply chain especially in regulatory issues (Mollenkopf et al., 2007).

For operational practices, the external factors such as customer market and regulatory environment have played significant role in return management processes. The processes in these operations are day-to-day operations regarding with managing return from customers to firms or retailer and distribution to firm. The returns are not only for cash return but also the items such as fault products from customers' service management or unsold products from retailers or distributors. The interfaces or cross functional integration between the operational management in return management and other function is shown in Figure 14.

Figure 14 describes the interfaces between the operational processes of return management with other cross functions. Once items or products are returned by customers the interfaces with customers relationship management is started by sharing information about the returned products and determining the routing of returned product processing. The verification, inspection and processing are then done by communicating with order fulfilment management that have connections with warehouse or returns central. Operational management then follows the guidelines to decide whether the returned products are disposed, refurbished or remanufacturing, recycling or reselling to secondary market. As the decisions have been made regarding

the returned product, cash flow from each area involved should be reported to firm.



Adopted from Croxton et al. (2001)

Figure 14 cross functional integration between the operational management in return management and other functions

References

Abdulrahman, M. D., Gunasekaran, A., & Subramanian, N. (2014). Critical barriers in implementing reverse logistics in the Chinese manufacturing sectors. International Journal of Production Economics, 147, 460-471.

Agan, Y., Acar, M. F., & Borodin, A. (2013). Drivers of environmental processes and their impact on performance: a study of Turkish SMEs. Journal of Cleaner Production, 51, 23-33. doi: http://dx.doi.org/10.1016/j.jclepro.2012.12.043

Ageron, B., Gunasekaran, A., & Spalanzani, A. (2012). Sustainable supply management: An empirical study. International Journal of Production Economics, 140(1), 168-182. doi: http://dx.doi.org/10.1016/j.ijpe.2011.04.007

Akdo?an, M. ?., & Co?kun, A. (2012). Drivers of Reverse Logistics Activities: An Empirical Investigation. Procedia - Social and Behavioral Sciences, 58, 1640-1649. doi: http://dx.doi.org/10.1016/j.sbspro.2012.09.1130

Akhavan, R. M., & Beckmann, M. (2016). A configuration of sustainable sourcing and supply management strategies. Journal of Purchasing and Supply Management. doi: http://dx.doi.org/10.1016/j.pursup.2016.07.006

Ala-Harja, H., & Helo, P. (2014). Green supply chain decisions – Case-based performance analysis from the food industry. Transportation Research Part E: Logistics and Transportation

Review, 69, 97-107. doi: http://dx.doi.org/10.1016/j.tre.2014.05.015

Alshamsi, A., & Diabat, A. (2015). A reverse logistics network design. Journal of Manufacturing Systems, 37, Part 3, 589-598. doi: http://dx.doi.org/10.1016/j.jmsy.2015.02.006

Álvarez-Gil, M. J., Berrone, P., Husillos, F. J., & Lado, N. (2007). Reverse logistics, stakeholders' influence, organizational slack, and managers' posture. Journal of Business Research, 60(5), 463-473. doi: http://dx.doi.org/10.1016/j.jbusres.2006.12.004

Amelia, L., Wahab, D. A., Haron, C. C., Muhamad, N., & Azhari, C. H. (2009). Initiating automotive component reuse in Malaysia. Journal of Cleaner Production, 17(17), 1572-1579.

Angerhofer, B. J., & Angelides, M. C. (2006). A model and a performance measurement system for collaborative supply chains. Decision Support Systems, 42(1), 283-301.

Appolloni, A., Sun, H., Jia, F., & Li, X. (2014). Green Procurement in the private sector: a state of the art review between 1996 and 2013. Journal of Cleaner Production, 85, 122-133. doi: http://dx.doi.org/10.1016/j.jclepro.2014.08.106

Arshinder, K., Kanda, A., & Deshmukh, S. (2011). A review on supply chain coordination: coordination mechanisms, managing uncertainty and research directions Supply chain coordination under uncertainty (pp. 39-82): Springer.

Autry, C. W., Daugherty, P. J., & Glenn Richey, R. (2001). The challenge of reverse logistics in catalog retailing. International Journal of Physical Distribution & Logistics Management, 31(1), 26-37.

Aviv, Y. (2001). The effect of collaborative forecasting on supply chain performance. Management science, 47(10), 1326-1343.

Aviv, Y. (2007). On the benefits of collaborative forecasting partnerships between retailers and manufacturers. Management science, 53(5), 777-794.

Banerjee, S. B., Iyer, E. S., & Kashyap, R. K. (2003). Corporate environmentalism: antecedents and influence of industry type. Journal of Marketing, 67(2), 106-122.

Bansal, S. (2009). Technology scorecards: Aligning IT investments with business performance: John Wiley & Sons.

Bansia, M., Varkey, J. K., & Agrawal, S. (2014). Development of a Reverse Logistics Performance Measurement System for a Battery Manufacturer. Procedia Materials Science, 6, 1419-1427. doi: http://dx.doi.org/10.1016/j.mspro.2014.07.121

Barratt, M. (2004). Understanding the meaning of collaboration in the supply chain. Supply Chain Management: An International Journal, 9(1), 30-42. doi: doi:10.1108/13598540410517566

Benetti, A. D. (2008). Water reuse: issues, technologies, and applications. Engenharia Sanitaria e Ambiental, 13(3), 247-248.

Bernardes, A., Espinosa, D. C. R., & Tenório, J. S. (2004). Recycling of batteries: a review of current processes and technologies. Journal of Power Sources, 130(1), 291-298.

Bernardes, A. M., Espinosa, D. C. R., & Tenório, J. A. S. (2003). Collection and recycling of portable batteries: a worldwide overview compared to the Brazilian situation. Journal of Power Sources, 124(2), 586-592.

Besch, K. (2005). Product-service systems for office furniture: barriers and opportunities on the European market. Journal of Cleaner Production, 13(10), 1083-1094.

Bhatnagar, R., & Sohal, A. S. (2005). Supply chain competitiveness: measuring the impact of location factors, uncertainty and

manufacturing practices. Technovation, 25(5), 443-456.

Björklund, M. (2011). Influence from the business environment on environmental purchasing — Drivers and hinders of purchasing green transportation services. Journal of Purchasing and Supply Management, 17(1), 11-22. doi: http://dx.doi.org/10.1016/j.pursup.2010.04.002

Bloemhof-Ruwaard, J. M., Fleischmann, M., & van Nunen, J. A. (1999). Reviewing distribution issues in reverse logistics: Springer.

Blome, C., Hollos, D., & Paulraj, A. (2014). Green procurement and green supplier development: antecedents and effects on supplier performance. International Journal of Production Research, 52(1), 32-49. doi: 10.1080/00207543.2013.825748

Blumberg, D. F. (1999). Strategic examination of reverse logistics & repair service requirements, needs, market size, and opportunities. Journal of Business Logistics, 20(2), 141.

Blumberga, A., Timma, L., Romagnoli, F., & Blumberga, D. (2015). Dynamic modelling of a collection scheme of waste portable batteries for ecological and economic sustainability. Journal of Cleaner Production, 88, 224-233. doi: http://dx.doi.org/10.1016/j.jclepro.2014.06.063

Bowen, F., Cousins, P., Lamming, R., & Faruk, A. (2006). Horses for Courses: Explaining the Gap Between the Theory and Practice of Green Supply. In J. Sarkis (Ed.), Greening the Supply Chain (pp. 151-172): Springer London.

Bowersox, J. D., & Gloss, J. D. (1996). Logistics Management: The Integrated Supply Chain Process: McGrawHill.

Cai, W.-g., & Zhou, X.-l. (2014). On the drivers of eco-innovation: empirical evidence from China. Journal of Cleaner Production,

79, 239-248. doi: http://dx.doi.org/10.1016/j.jclepro.2014.05.035

Cannella, S., Bruccoleri, M., & Framinan, J. M. (2016). Closed-loop supply chains: What reverse logistics factors influence performance? International Journal of Production Economics, 175, 35-49. doi: http://dx.doi.org/10.1016/j.ijpe.2016.01.012

Cao, M., & Zhang, Q. (2011). Supply chain collaboration: Impact on collaborative advantage and firm performance. Journal of Operations Management, 29(3), 163-180. doi: http://dx.doi.org/10.1016/j.jom.2010.12.008

Carter, C. R., & Carter, J. R. (1998). Interorganizational Determinants of Environmental Purchasing: Initial Evidence from the Consumer Products Industries*. Decision Sciences, 29(3), 659-684. doi: 10.1111/j.1540-5915.1998.tb01358.x

Carter, C. R., & Dresner, M. (2001). Purchasing's Role in Environmental Management: Cross-Functional Development of Grounded Theory. Journal of Supply Chain Management, 37(2), 12-27. doi: 10.1111/j.1745-493X.2001.tb00102.x

Carter, C. R., & Ellram, L. M. (1998). Reverse logistics: a review of the literature and framework for future investigation. Journal of Business Logistics, 19(1), 85.

Carter, C. R., & Jennings, M. M. (2002). Logistics social responsibility: an integrative framework. Journal of Business Logistics, 23(1), 145-180.

Carter, C. R., & Jennings, M. M. (2004). THE ROLE OF PURCHASING IN CORPORATE SOCIAL RESPONSIBILITY: A STRUCTURAL EQUATION ANALYSIS. Journal of Business Logistics, 25(1), 145-186. doi: 10.1002/j.2158-1592.2004.tb00173.x

Carter, C. R., Kale, R., & Grimm, C. M. (2000). Environmental purchasing and firm performance: an empirical investigation.

Transportation Research Part E: Logistics and Transportation Review, 36(3), 219-228. doi: http://dx.doi.org/10.1016/S1366-5545(99)00034-4

Carter, C. R., & Rogers, D. S. (2008). A framework of sustainable supply chain management: moving toward new theory. International Journal of Physical Distribution & Logistics Management, 38(5), 360-387.

Carter, R., Price, P., & Emmett, S. (2005). Stores and Distribution Management. Great Britain: Liverpool Business Publishing.

Chan, H. K., He, H., & Wang, W. Y. C. (2012). Green marketing and its impact on supply chain management in industrial markets. Industrial Marketing Management, 41(4), 557-562. doi: http://dx.doi.org/10.1016/j.indmarman.2012.04.002

Chan, R. Y. K., He, H., Chan, H. K., & Wang, W. Y. C. (2012). Environmental orientation and corporate performance: The mediation mechanism of green supply chain management and moderating effect of competitive intensity. Industrial Marketing Management, 41(4), 621-630. doi: http://dx.doi.org/10.1016/j.indmarman.2012.04.009

Chen, C.-C. (2005). Incorporating green purchasing into the frame of ISO 14000. Journal of Cleaner Production, 13(9), 927-933. doi: http://dx.doi.org/10.1016/j.jclepro.2004.04.005

Chen, D.-j., & Liang, S.-w. (2012). Evaluation of Internal Costs and Benefits for Taiwanese Computer Manufacturers Adopting Green Supply Chains. The Asian Journal of Shipping and Logistics, 28(1), 83-104. doi: http://dx.doi.org/10.1016/j.ajsl.2012.04.005

Chen, I. J., & Paulraj, A. (2004). Towards a theory of supply chain management: the constructs and measurements. Journal of Operations Management, 22(2), 119-150.

Chen, Y.-S. (2010). The Drivers of Green Brand Equity: Green Brand Image, Green Satisfaction, and Green Trust. Journal of Business Ethics, 93(2), 307-319. doi: 10.1007/s10551-009-0223-9

Cheung, C. F., Cheung, C. M., & Kwok, S. K. (2012). A Knowledge-based Customization System for Supply Chain Integration. Expert Systems with Applications, 39(4), 3906-3924. doi: http://dx.doi.org/10.1016/j.eswa.2011.08.096

Chin, T. A., Tat, H. H., & Sulaiman, Z. (2015). Green Supply Chain Management, Environmental Collaboration and Sustainability Performance. Procedia CIRP, 26, 695-699. doi: http://dx.doi.org/10.1016/j.procir.2014.07.035

Chiou, C. Y., Chen, H. C., Yu, C. T., & Yeh, C. Y. (2012). Consideration Factors of Reverse Logistics Implementation -A Case Study of Taiwan's Electronics Industry. Procedia - Social and Behavioral Sciences, 40, 375-381. doi: http://dx.doi.org/10.1016/j.sbspro.2012.03.203

Chuang, S.-P., & Yang, C.-L. (2014). Key success factors when implementing a green-manufacturing system. Production Planning & Control, 25(11), 923-937. doi: 10.1080/09537287.2013.780314

Cooper, M. C., Lambert, D. M., & Pagh, J. D. (1997). Supply chain management: more than a new name for logistics. The international journal of logistics management, 8(1), 1-14.

Cophra, S., & Meindl, P. (2016). Supply Chain Management: Strategy, Planning, and Operation: Prentice Hall.

Corbett, C. J., & Kleindorfer, P. R. (2003). Environmental management and operations management: introduction to the third special issue. Production and Operations Management, 12(3), 287-289.

Cousins, P. D., Lamming, R. C., & Bowen, F. (2004). The role of risk in environment?related supplier initiatives. International Journal of Operations & Production Management, 24(6), 554-565. doi: doi:10.1108/01443570410538104

Croxton, K. L., García-Dastugue, S. J., Lambert, D. M., & Rogers, D. S. (2001). The Supply Chain Management Processes. The international journal of logistics management, 12(2), 13-36. doi: doi:10.1108/09574090110806271

Cruz-Rivera, R., & Ertel, J. (2009). Reverse logistics network design for the collection of end-of-life vehicles in Mexico. European Journal of Operational Research, 196(3), 930-939.

Cuerva, M. C., Triguero-Cano, Á., & Córcoles, D. (2014). Drivers of green and non-green innovation: empirical evidence in Low-Tech SMEs. Journal of Cleaner Production, 68, 104-113. doi: http://dx.doi.org/10.1016/j.jclepro.2013.10.049

D'Amours, S., Rönnqvist, M., & Weintraub, A. (2008). Using operational research for supply chain planning in the forest products industry. INFOR: Information Systems and Operational Research, 46(4), 265-281.

Dash, M. S. K. (2006). Implementing Collaborative Forecasting to Improve Supply Chain Performance.

Daugherty, P. J., Richey, R. G., Genchev, S. E., & Chen, H. (2005). Reverse logistics: superior performance through focused resource commitments to information technology. Transportation Research Part E: Logistics and Transportation Review, 41(2), 77-92.

de Brito, M., & Dekker, R. (2004). A Framework for Reverse Logistics. In R. Dekker, M. Fleischmann, K. Inderfurth & L. Van Wassenhove (Eds.), Reverse Logistics (pp. 3-27): Springer Berlin Heidelberg.

de Brito, M. P., & van der Laan, E. A. (2009). Inventory control with product returns: The impact of imperfect information. European Journal of Operational Research, 194(1), 85-101.

Demir, E., Bekta?, T., & Laporte, G. (2014). A review of recent research on green road freight transportation. European Journal of Operational Research, 237(3), 775-793. doi: http://dx.doi.org/10.1016/j.ejor.2013.12.033

Demirel, E., Demirel, N., & Gökçen, H. (2016). A mixed integer linear programming model to optimize reverse logistics activities of end-of-life vehicles in Turkey. Journal of Cleaner Production, 112, Part 3, 2101-2113. doi: http://dx.doi.org/10.1016/j.jclepro.2014.10.079

Demirel, N., Özceylan, E., Paksoy, T., & Gökçen, H. (2014). A genetic algorithm approach for optimising a closed-loop supply chain network with crisp and fuzzy objectives. International Journal of Production Research, 52(12), 3637-3664. doi: 10.1080/00207543.2013.879616

Diabat, A., Kannan, D., & Mathiyazhagan, K. (2014). Analysis of enablers for implementation of sustainable supply chain management – A textile case. Journal of Cleaner Production, 83, 391-403. doi: http://dx.doi.org/10.1016/j.jclepro.2014.06.081

Dornfeld, D., Yuan, C., Diaz, N., Zhang, T., & Vijayaraghavan, A. (2013). Introduction to Green Manufacturing. In D. A. Dornfeld (Ed.), Green Manufacturing (pp. 1-23): Springer US.

Dou, Y., Sarkis, J., & Bai, C. (2014). Government Green Procurement: A Fuzzy-DEMATEL Analysis of Barriers. In C. Kahraman & B. Öztay?i (Eds.), Supply Chain Management Under Fuzziness (Vol. 313, pp. 567-589): Springer Berlin Heidelberg.

Dowlatshahi, S. (2000). Developing a theory of reverse logistics. Interfaces, 30(3), 143-155.

Efendigil, T., Önüt, S., & Kongar, E. (2008). A holistic approach for selecting a third-party reverse logistics provider in the presence of vagueness. Computers & Industrial Engineering, 54(2), 269-287. doi: http://dx.doi.org/10.1016/j.cie.2007.07.009

Egger, H., & Falkinger, J. (2006). The role of public infrastructure and subsidies for firm location and international outsourcing. European Economic Review, 50(8), 1993-2015. doi: 10.1016/j.euroecorev.2005.10.002

ElTayeb, T. K., & Zailani, S. (2011). Drivers on the reverse logistics: evidence from Malaysian certified companies. International Journal of Logistics Systems and Management, 10(4), 375-397.

ElTayeb, T. K., Zailani, S., & Jayaraman, K. (2010). The examination on the drivers for green purchasing adoption among EMS 14001 certified companies in Malaysia. Journal of Manufacturing Technology Management, 21(2), 206-225. doi: doi:10.1108/17410381011014378

Ene, S., & Öztürk, N. (2015). Network modeling for reverse flows of end-of-life vehicles. Waste Management, 38, 284-296. doi: http://dx.doi.org/10.1016/j.wasman.2015.01.007

Fargher, J. S. (1997). There shops, three strategies: Using MRP?II, JIT, and TOC in remanufacturing cells. National Productivity Review, 16(4), 77-93.

Feng, Y., D'Amours, S., LeBel, L., & Naurelfath, M. (2010). Integrated bio-refinery and forest products supply chain network design using mathematical programming approach. In CIRRELT (Ed.). Quebec, Canada.

Ferguson, M., Guide, V. D., Koca, E., & Souza, G. C. (2009). The value of quality grading in remanufacturing. Production and Operations Management, 18(3), 300-314.

Ferrer, G., & Whybark, D. (2001). Material planning for a remanufacturing facility. Production and Operations Management, 10(2), 112-124.

Flammer, C. (2012). Corporate Social Responsibility and Shareholder Value: The Environmental Consciousness of Investors. Acedemy of Management Journal, 55(3), 758-781.

Fleischmann, B., Myer, H., & Wagner, M. (2003). Advanced Planning. In H. Stadtler & C. Kilger (Eds.), Supply Chain Management and Advanced Planning: Concepts, Models, Software, and Case Studies (pp. 86): Springer.

Fleischmann, M., Bloemhof-Ruwaard, J. M., Dekker, R., Van der Laan, E., Van Nunen, J. A., & Van Wassenhove, L. N. (1997). Quantitative models for reverse logistics: A review. European Journal of Operational Research, 103(1), 1-17.

Fraj, E., Martínez, E., & Matute, J. (2011). Green marketing strategy and the firm's performance: the moderating role of environmental culture. Journal of Strategic Marketing, 19(4), 339-355.

Fuentes, C. (2015). How green marketing works: Practices, materialities, and images. Scandinavian Journal of Management, 31(2), 192-205. doi: http://dx.doi.org/10.1016/j.scaman.2014.11.004

Gabzdylova, B., Raffensperger, J. F., & Castka, P. (2009). Sustainability in the New Zealand wine industry: drivers, stakeholders and practices. Journal of Cleaner Production, 17(11), 992-998. doi: http://dx.doi.org/10.1016/j.jclepro.2009.02.015

Gaines, L. (2014). The future of automotive lithium-ion battery recycling: Charting a sustainable course. Sustainable Materials and Technologies, 1–2, 2-7. doi: http://dx.doi.org/10.1016/j.susmat.2014.10.001

Galbreth, M. R., & Blackburn, J. D. (2006). Optimal acquisition and sorting policies for remanufacturing. Production and Operations Management, 15(3), 384-392.

Genchev, S. E., Glenn Richey, R., & Gabler, C. B. (2011). Evaluating reverse logistics programs: a suggested process formalization. The international journal of logistics management, 22(2), 242-263.

Genchev, S. E., Richey, R. G., & Gabler, C. B. (2011). Evaluating reverse logistics programs: a suggested process formalization. The international journal of logistics management, 22(2), 242-263. doi: doi:10.1108/09574091111156578

Geyer, R., & Jackson, T. (2004). Supply loops and their constraints: the industrial ecology of recycling and reuse. California Management Review, 46(2), 55-73.

Ghazilla, R. A. R., Sakundarini, N., Abdul-Rashid, S. H., Ayub, N. S., Olugu, E. U., & Musa, S. N. (2015). Drivers and Barriers Analysis for Green Manufacturing Practices in Malaysian SMEs: A Preliminary Findings. Procedia CIRP, 26, 658-663. doi: http://dx.doi.org/10.1016/j.procir.2015.02.085

Giunipero, L. C., Hooker, R. E., & Denslow, D. (2012). Purchasing and supply management sustainability: Drivers and barriers. Journal of Purchasing and Supply Management, 18(4), 258-269. doi: http://dx.doi.org/10.1016/j.pursup.2012.06.003

Giuntini, R., & Andel, T. (1995). ADVANCE WITH REVERSE LOGISTICS. Transportation & Distribution.

Golicic, S. L., Skinner, L. R., Bryant, P. T., & Glenn Richey, R. (2008). Examining the impact of reverse logistics disposition strategies. International Journal of Physical Distribution & Logistics Management, 38(7), 518-539.

González-Torre, P. L., Adenso-D??, B., & Artiba, H. (2004). Environmental and reverse logistics policies in European bottling and packaging firms. International Journal of Production Economics, 88(1), 95-104.

Govindan, K., Kaliyan, M., Kannan, D., & Haq, A. N. (2014). Barriers analysis for green supply chain management implementation in Indian industries using analytic hierarchy process. International Journal of Production Economics, 147, Part B, 555-568. doi: http://dx.doi.org/10.1016/j.ijpe.2013.08.018

Govindan, K., Paam, P., & Abtahi, A.-R. (2016). A fuzzy multi-objective optimization model for sustainable reverse logistics network design. Ecological Indicators, 67, 753-768.

Graci, S., & Dodds, R. (2008). Why go green? The business case for environmental commitment in the Canadian hotel industry. Anatolia, 19(2), 251-270.

Gray, C., & Charter, M. (2007). Remanufacturing and product design. International Journal of Product Development, 6(3-4), 375-392.

Green Jr, K. W., Zelbst, P. J., Meacham, J., & Bhadauria, V. S. (2012). Green supply chain management practices: impact on performance. Supply Chain Management: An International Journal, 17(3), 290-305.

Green, K., Morton, B., & New, S. (1996). PURCHASING AND ENVIRONMENTAL MANAGEMENT: INTERACTIONS, POLICIES AND OPPORTUNITIES. Business Strategy and the Environment, 5(3), 188-197. doi: 10.1002/(SICI)1099-0836(199609)5:3<188::AID-BSE60>3.0.CO;2-P

Guenther, E., Scheibe, L., & Farkavcová, V. G. (2010). "The Hurdles Analysis" as an instrument for improving sustainable stewardship. Management Research Review, 33(4), 340-356. doi: doi:10.1108/01409171011030453

Guide Jr, V. D. R., Teunter, R. H., & Van Wassenhove, L. N. (2003). Matching demand and supply to maximize profits from remanufacturing. Manufacturing & Service Operations Management, 5(4), 303-316.

Guide Jr, V. D. R., & Van Wassenhove, L. N. (2002). The reverse supply chain. Harvard business review, 80(2), 25-26.

Guide, V. D. R., Harrison, T. P., & Van Wassenhove, L. N. (2003). The challenge of closed-loop supply chains. Interfaces, 33(6), 3-6.

Guiltinan, J. P., & Nwokoye, N. G. (1975). Developing Distribution Channels and Systems in the Emerging Recycling Industries. International Journal of Physical Distribution, 6(1), 28-38. doi: doi:10.1108/eb014359

Gupta, S. M., Lambert, A., & Giudice, F. (2007). Product Design for the Environment Environment Conscious Manufacturing (pp. 19-55): CRC Press.

Gupta, S. M., & Veerakamolmal, P. (2001). Aggregate planning for end-of-life products Greener Manufacturing and Operations: from Design to Delivery and Back (Vol. 205, pp. 205-222): Greenleaf Publishing in association with GSE Research.

Haake, H., & Seuring, S. (2009). Sustainable procurement of minor items – exploring limits to sustainability. Sustainable Development, 17(5), 284-294. doi: 10.1002/sd.424

Hahler, S., & Fleischmann, M. (2013). The value of acquisition price differentiation in reverse logistics. Journal of Business Economics, 83(1), 1-28. doi: 10.1007/s11573-012-0641-5

Handfield, R. B., Walton, S. V., Seegers, L. K., & Melnyk, S. A. (1997). 'Green' value chain practices in the furniture industry. Journal of Operations Management, 15(4), 293-315. doi: http://dx.doi.org/10.1016/S0272-6963(97)00004-1

Hauschildt, V., & Schulze-Ehlers, B. (2014). An Empirical Investigation into the Adoption of Green Procurement Practices in the German Food Service Industry. International Food and Agribusiness Management Review, 17(3), 1.

Helms, M. M., Ettkin, L. P., & Chapman, S. (2000). Supply chain forecasting-Collaborative forecasting supports supply chain management. Business Process Management Journal, 6(5), 392-407.

Hendrickson, C., Lave, L., McMichael, F., Siewiorek, D., Smailagic, A., & Wu, T.-s. (1994). Product disposal and re-use issues for portable computer design. Paper presented at the Electronics and the Environment, 1994. ISEE 1994., Proceedings., 1994 IEEE International Symposium on.

Heskett, J. L., & Sasser Jr, W. E. (2010). The service profit chain Handbook of service science (pp. 19-29): Springer.

Heskett, J. L., Sasser, W. E., & Schlesinger, L. A. (1997). The service profit chain. New York.

Hinojosa, Y., Kalcsics, J., Nickel, S., Puerto, J., & Velten, S. (2008). Dynamic supply chain design with inventory. Computers & Operations Research, 35(2), 373-391.

Hoejmose, S., Brammer, S., & Millington, A. (2012). "Green" supply chain management: The role of trust and top management in B2B and B2C markets. Industrial Marketing Management, 41(4), 609-620. doi: http://dx.doi.org/10.1016/j.indmarman.2012.04.008

Hojas Baenas, J. M., de Castro, R., Gomes Battistelle, R. A., & Gobbo Junior, J. A. (2011). A study of reverse logistics flow management in vehicle battery industries in the midwest of the state of São Paulo (Brazil). Journal of Cleaner Production, 19(2–3), 168-172. doi: http://dx.doi.org/10.1016/j.jclepro.2010.08.018

Holweg, M., Disney, S., Holmström, J., & Småros, J. (2005). Supply chain collaboration:: Making sense of the strategy continuum. European management journal, 23(2), 170-181.

Horvath, P. A., Autry, C. W., & Wilcox, W. E. (2005). Liquidity implications of reverse logistics for retailers: A Markov chain approach. Journal of Retailing, 81(3), 191-203.

Hsu, C. C., Tan, K. C., Zailani, S. H. M., & Jayaraman, V. (2013). Supply chain drivers that foster the development of green initiatives in an emerging economy. International Journal of Operations & Production Management, 33(6), 656-688. doi: doi:10.1108/IJOPM-10-2011-0401

Ijomah, W. L., McMahon, C. A., Hammond, G. P., & Newman, S. T. (2007). Development of design for remanufacturing guidelines to support sustainable manufacturing. Robotics and Computer-Integrated Manufacturing, 23(6), 712-719.

Ilgin, M. A., & Gupta, S. M. (2010). Environmentally conscious manufacturing and product recovery (ECMPRO): A review of the state of the art. Journal of Environmental Management, 91(3), 563-591. doi: http://dx.doi.org/10.1016/j.jenvman.2009.09.037

Indrianti, N., & Rustikasari, A. G. (2010). A Reverse Logistics Model For Battery Recycling Industry. Paper presented at the Asia Pacific Industrial Engineering and Management Systems Conference.

Jayaraman, V., Guide, V. D. R., & Srivastava, R. (1999). A closed-loop logistics model for remanufacturing. J Oper Res Soc, 50(5), 497-508.

Jayaraman, V., Klassen, R., & Linton, J. D. (2007). Supply chain management in a sustainable environment. Journal of Operations Management, 25(6), 1071-1074.

Jayaraman, V., & Luo, Y. (2007). Creating Competitive Advantages Through New Value Creation: A Reverse Logistics Perspective. The Academy of Management Perspectives, 21(2), 56-73. doi: 10.5465/amp.2007.25356512

Jayaraman, V., Patterson, R. A., & Rolland, E. (2003). The design of reverse distribution networks: Models and solution procedures. European Journal of Operational Research, 150(1), 128-149.

Jayaraman, V., & Pirkul, H. (2001). Planning and coordination of production and distribution facilities for multiple commodities. European Journal of Operational Research, 133(2), 394-408.

Ji, G. (2006). Market-motivated value systems, reverse logistics and the evaluation model for the third party reverse logistics providers. International Logistics and Trade, 4(1), 53-92.

Jiménez-Parra, B., Rubio, S., & Vicente-Molina, M.-A. (2014). Key drivers in the behavior of potential consumers of remanufactured products: a study on laptops in Spain. Journal of Cleaner Production, 85, 488-496. doi: http://dx.doi.org/10.1016/j.jclepro.2014.05.047

Jiménez, B., & Asano, T. (2008). Water reuse: an international survey of current practice, issues and needs. Water Intelligence Online, 7, 9781780401881.

Jindal, A., & Sangwan, K. S. (2013a). Development of an interpretive structural model of drivers for reverse logistics implementation in Indian industry. International Journal of Business Performance and Supply Chain Modelling, 5(4), 325-342. doi: doi:10.1504/IJBPSCM.2013.058201

Jindal, A., & Sangwan, K. S. (2013b). An integrated fuzzy multi-criteria evaluation of sustainable reverse logistics network models. Paper presented at the Fuzzy Systems (FUZZ), 2013 IEEE International Conference on.

Kam, B., Christopherson, G., Smyrnios, K., & Walker, R. (2006). Strategic Business Operations, Freight Transport and Eco-efficiency: A Conceptual Model. In J. Sarkis (Ed.), Greening the Supply Chain (pp. 103-115): Springer London.

Kannan, D., Govindan, K., & Rajendran, S. (2015). Fuzzy Axiomatic Design approach based green supplier selection: a case study from Singapore. Journal of Cleaner Production, 96, 194-208. doi: http://dx.doi.org/10.1016/j.jclepro.2013.12.076

Kapetanopoulou, P., & Tagaras, G. (2011). Drivers and obstacles of product recovery activities in the Greek industry. International Journal of Operations & Production Management, 31(2), 148-166.

Kara, S. S., & Onut, S. (2010). A two-stage stochastic and robust programming approach to strategic planning of a reverse supply network: The case of paper recycling. Expert Systems with Applications, 37(9), 6129-6137.

Kauder, S., & Meyr, H. (2009). Strategic network planning for an international automotive manufacturer. OR spectrum, 31(3), 507-532.

Kaya, O., & Urek, B. (2016). A mixed integer nonlinear programming model and heuristic solutions for location, inventory and pricing decisions in a closed loop supply chain. Computers & Operations Research, 65, 93-103. doi: http://dx.doi.org/10.1016/j.cor.2015.07.005

Kelle, P., & Silver, E. A. (1989). Forecasting the returns of reusable containers. Journal of Operations Management, 8(1), 17-35.

Khidir ElTayeb, T., Zailani, S., & Jayaraman, K. (2010). The examination on the drivers for green purchasing adoption among EMS 14001 certified companies in Malaysia. Journal of Manufacturing Technology Management, 21(2), 206-225.

Kim, K., Song, I., Kim, J., & Jeong, B. (2006). Supply planning model for remanufacturing system in reverse logistics environment. Computers & Industrial Engineering, 51(2), 279-287.

Kim, N., Janic, M., & Wee, B. v. (2009). Trade-Off Between Carbon Dioxide Emissions and Logistics Costs Based on Multiobjective Optimization. Transportation Research Record: Journal of the Transportation Research Board, 2139, 107-116. doi: doi:10.3141/2139-13

Kim, T., Hong, Y., & Lee, J. (2005). Joint economic production allocation and ordering policies in a supply chain consisting of multiple plants and a single retailer. International Journal of Production Research, 43(17), 3619-3632.

Klausner, M., Grimm, W. M., & Hendrickson, C. (1998). Reuse of electric motors in consumer products. Journal of Industrial Ecology, 2(2), 89-102.

Knemeyer, A. M., Ponzurick, T. G., & Logar, C. M. (2002). A qualitative examination of factors affecting reverse logistics systems for end-of-life computers. International Journal of Physical Distribution & Logistics Management, 32(6), 455-479.

Ko, H. J., & Evans, G. W. (2007). A genetic algorithm-based heuristic for the dynamic integrated forward/reverse logistics network for 3PLs. Computers & Operations Research, 34(2), 346-366.

Koepfer, C. (1993). Fixing up older machine tools. Modern Machine Shop, 65, 90-90.

Krikke, H. R., van Harten, A., & Schuur, P. C. (1999). Business case Océ: Reverse logistic network re-design for copiers. OR-Spektrum, 21(3), 381-409. doi: 10.1007/s002910050095

Kritchanchai, D., & MacCarthy, B. L. (1999). Responsiveness of the order fulfilment process. International Journal of Operations & Production Management, 19(8), 812-833. doi: doi:10.1108/01443579910274419

Krupp, J. A. (1993). Structuring bills of material for automotive remanufacturing. Production and Inventory Management Journal, 34(4), 46.

Kumar, D. T., Soleimani, H., & Kannan, G. (2014). Forecasting return products in an integrated forward/reverse supply chain utilizing an ANFIS. International Journal of Applied Mathematics and Computer Science, 24(3), 669-682.

Kumar, S., & Putnam, V. (2008). Cradle to cradle: Reverse logistics strategies and opportunities across three industry sectors. International Journal of Production Economics, 115(2), 305-315. doi: http://dx.doi.org/10.1016/j.ijpe.2007.11.015

La Londe, B. J., & Masters, J. M. (1994). Emerging logistics strategies: blueprints for the next century. International Journal of Physical Distribution & Logistics Management, 24(7), 35-47.

Lambert, A., & Gupta, S. M. (2002). Demand-driven disassembly optimization for electronic products package reliability. Journal of Electronics Manufacturing, 11(02), 121-135.

Lambert, D., M, & Stock, J. R. (2001). Strategic Logistics Management (4 ed.): McGraw Hill

Lambert, D. M. (2008). Supply chain management: processes, partnerships, performance: Supply Chain Management Inst.

Lambert, D. M., & Cooper, M. C. (2000). Issues in supply chain management. Industrial Marketing Management, 29(1), 65-83.

Lambert, D. M., Cooper, M. C., & Pagh, J. D. (1998). Supply chain management: implementation issues and research opportunities. The international journal of logistics management, 9(2), 1-20.

Lambert, D. M., Stock, J. R., & Ellram, L. M. (1998). Fundamentals of logistics management: McGraw-Hill/Irwin.

Lambert, M. D., & Pohlen, L. T. (2001). Supply Chain Metrics. The international journal of logistics management, 12(1), 1-19. doi: doi:10.1108/09574090110806190

Lamming, R., & Hampson, J. (1996). The Environment as a Supply Chain Management Issue. British Journal of Management, 7, S45-S62. doi: 10.1111/j.1467-8551.1996.tb00147.x

Large, R. O., & Gimenez Thomsen, C. (2011). Drivers of green supply management performance: Evidence from Germany. Journal of Purchasing and Supply Management, 17(3), 176-184. doi: http://dx.doi.org/10.1016/j.pursup.2011.04.006

Large, R. O., Kramer, N., & Hartmann, R. K. (2013). Procurement of logistics services and sustainable development in Europe: Fields of activity and empirical results. Journal of Purchasing and Supply Management, 19(3), 122-133. doi: http://dx.doi.org/10.1016/j.pursup.2013.05.002

Lau, K. H., & Wang, Y. (2009). Reverse logistics in the electronic industry of China: a case study. Supply Chain Management: An International Journal, 14(6), 447-465. doi: doi:10.1108/13598540910995228

Lee, C. K. M., & Lam, J. S. L. (2012). Managing reverse logistics to enhance sustainability of industrial marketing. Industrial Marketing Management, 41(4), 589-598.

Lee, S. M., Tae Kim, S., & Choi, D. (2012). Green supply chain management and organizational performance. Industrial Management & Data Systems, 112(8), 1148-1180.

Leonidou, C. N., Katsikeas, C. S., & Morgan, N. A. (2013). "Greening" the marketing mix: do firms do it and does it pay off? Journal of the Academy of Marketing Science, 41(2), 151-170.

Leppelt, T., Foerstl, K., Reuter, C., & Hartmann, E. (2013). Sustainability management beyond organizational boundaries–sustainable supplier relationship management in the chemical industry. Journal of Cleaner Production, 56, 94-102. doi: http://dx.doi.org/10.1016/j.jclepro.2011.10.011

Li, X., & Li, Y. (2011). Supply chain models with active acquisition and remanufacturing Supply Chain Coordination under Uncertainty (pp. 109-128): Springer.

Lin, S.-S., & Chiu, K.-H. (2015). An evaluation of recycling schemes for waste dry batteries – a simulation approach. Journal of Cleaner Production, 93, 330-338. doi: http://dx.doi.org/10.1016/j.jclepro.2015.01.045

Linton, J., Yeomans, J., & Yoogalingam, R. (2002). Supply planning for industrial ecology and remanufacturing under uncertainty: a numerical study of leaded-waste recovery from television disposal. Journal of the Operational Research Society, 1185-1196.

Linton, J. D., Yeomans, J. S., & Yoogalingam, R. (2005). Recovery and reclamation of durable goods: a study of television CRTs. Resources, Conservation and Recycling, 43(4), 337-352.

Liu, S., Kasturiratne, D., & Moizer, J. (2012). A hub-and-spoke model for multi-dimensional integration of green marketing and sustainable supply chain management. Industrial Marketing Management, 41(4), 581-588.

Long, E., Kokke, S., Lundie, D., Shaw, N., Ijomah, W., & Kao, C.-c. (2016). Technical solutions to improve global sustainable management of waste electrical and electronic equipment (WEEE) in the EU and China. Journal of Remanufacturing, 6(1), 1.

Lu, D. (2011). Fundamentals of supply chain management: Bookboon.

Lundkvist, K., Larsson, M., & Samuelsson, C. (2013). Optimisation of a centralised recycling system for steel plant by-products, a logistics perspective. Resources, Conservation and Recycling, 77, 29-36.

Luthra, S., Qadri, M. A., Garg, D., & Haleem, A. (2014). Identification of critical success factors to achieve high green supply chain management performances in Indian automobile industry. International Journal of Logistics Systems and Management, 18(2), 170-199. doi: doi:10.1504/IJLSM.2014.062325

Ma, H., & Davidrajuh, R. (2005). An iterative approach for distribution chain design in agile virtual environment. Industrial Management and Data Systems, 105(6), 299-323.

Malone, T. W., & Crowston, K. (1994). The interdisciplinary study of coordination. ACM Computing Surveys (CSUR), 26(1), 87-119.

Manthou, V., Vlachopoulou, M., & Folinas, D. (2004). Virtual e-Chain (VeC) model for supply chain collaboration. International Journal of Production Economics, 87(3), 241-250. doi: http://dx.doi.org/10.1016/S0925-5273(03)00218-4

Marianov, V., Ríos, M., & Icaza, M. J. (2008). Facility location for market capture when users rank facilities by shorter travel and waiting times. European Journal of Operational Research, 191(1), 32-44. doi: 10.1016/j.ejor.2007.07.025

Marx-Gomez, J., Rautenstrauch, C., Nürnberger, A., & Kruse, R. (2002). Neuro-fuzzy approach to forecast returns of scrapped products to recycling and remanufacturing. Knowledge-Based Systems, 15(1), 119-128.

Masudin, I. (2012). Location-allocation modelling for Indonesian multi-echelon LPG supply chain. RMIT University.

Masudin, I. (2015). An Investigation of the Relationship between Facility Location Decisions, Service Level and Distribution Costs: A Proposed Model for Indonesian Lpg Supply Chain. International Journal of Business and Society, 16(1), 117.

McCarthy, T. M., & Golicic, S. L. (2002). Implementing collaborative forecasting to improve supply chain performance. International Journal of Physical Distribution & Logistics Management, 32(6), 431-454.

McMurray, A. J., Islam, M. M., Siwar, C., & Fien, J. (2014). Sustainable procurement in Malaysian organizations: Practices, barriers and opportunities. Journal of Purchasing and Supply Management, 20(3), 195-207. doi: http://dx.doi.org/10.1016/j.pursup.2014.02.005

Meade, L., & Sarkis, J. (2002). A conceptual model for selecting and evaluating third?party reverse logistics providers. Supply Chain Management: An International Journal, 7(5), 283-295. doi: doi:10.1108/13598540210447728

Melo, M. T., Nickel, S., & Saldanha-Da-Gama, F. (2009). Facility location and supply chain management–A review. European Journal of Operational Research, 196(2), 401-412.

Melo, M. T., Nickel, S., & Saldanha-da-Gama, F. (2009). Facility location and supply chain management - A review. European Journal of Operational Research, 196(2), 401-412.

Melynk, S. A., & Smith, R. T. (1996). Green Manufacturing. Dearborn - MI: SME Publication.

Menon, A., & Menon, A. (1997). Enviropreneurial marketing strategy: the emergence of corporate environmentalism as market strategy. The Journal of Marketing, 51-67.

Meyr, H., Wagner, M., & Rohde, J. (2015). Structure of advanced planning systems Supply chain management and advanced planning (pp. 99-106): Springer.

Miao, Z., Cai, S., & Xu, D. (2012). Exploring the antecedents of logistics social responsibility: A focus on Chinese firms. International Journal of Production Economics, 140(1), 18-27. doi: http://dx.doi.org/10.1016/j.ijpe.2011.05.030

Min, H., & Galle, W. P. (2001). Green purchasing practices of US firms. International Journal of Operations & Production Management, 21(9), 1222-1238. doi: doi:10.1108/EUM0000000005923

Min, H., Ko, H. J., & Ko, C. S. (2006). A genetic algorithm approach to developing the multi-echelon reverse logistics network for product returns. Omega, 34(1), 56-69.

Mollenkopf, D., Russo, I., & Frankel, R. (2007). The returns management process in supply chain strategy. International Journal of Physical Distribution & Logistics Management, 37(7), 568-592. doi: doi:10.1108/09600030710776482

Mont, O., Dalhammar, C., & Jacobsson, N. (2006). A new business model for baby prams based on leasing and product remanufacturing. Journal of Cleaner Production, 14(17), 1509-1518.

Motwani, J., & Mohamed, Z. M. (2002). Flow manufacturing – necessity, benefits, and implementation: a case study. Industrial Management & Data Systems, 102(2), 73-79. doi: doi:10.1108/02635570210419618

Munson, C. L., & Rosenblatt, M. J. (2001). Coordinating a three-level supply chain with quantity discounts. IIE transactions, 33(5), 371-384.

Murphy, P. R., & Poist, R. (1988). Management of logistical retromovements: an empirical analysis of literature suggestions. Paper presented at the Journal of the Transportation Research Forum.

Murphy, P. R., & Poist, R. F. (2003). Green perspectives and practices: a "comparative logistics" study. Supply Chain Management: An International Journal, 8(2), 122-131.

Nagel, M. H. (2003). Managing the environmental performance of production facilities in the electronics industry: more than application of the concept of cleaner production. Journal of Cleaner Production, 11(1), 11-26. doi: http://dx.doi.org/10.1016/S0959-6526(02)00021-5

Nakano, M. (2009). Collaborative forecasting and planning in supply chains: The impact on performance in Japanese manufacturers. International Journal of Physical Distribution & Logistics Management, 39(2), 84-105.

Nenes, G., & Nikolaidis, Y. (2012). A multi-period model for managing used product returns. International Journal of Production Research, 50(5), 1360-1376. doi: 10.1080/00207543.2011.609650

Ng, T., & Chung, W. (2009). The Roles of Distributor in the Supply Chain–Push-pull Boundary. International Journal of business and management, 3(7), 28.

Nikolaidis, Y. (2009). A modelling framework for the acquisition and remanufacturing of used products. International Journal of Sustainable Engineering, 2(3), 154-170.

Nikolaou, I. E., & Evangelinos, K. I. (2013). A framework for evaluating the social responsibility quality of reverse logistics Quality Management in Reverse Logistics (pp. 53-72): Springer.

Ninlawan, C., Seksan, P., Tossapol, K., & Pilada, W. (2010). The implementation of green supply chain management practices in electronics industry. Paper presented at the Proceedings of the international multiconference of engineers and computer scientists.

Nyilasy, G., Gangadharbatla, H., & Paladino, A. (2014). Perceived greenwashing: The interactive effects of green advertising and corporate environmental performance on consumer reactions. Journal of Business Ethics, 125(4), 693-707.

Owen, S. H., & Daskin, M. S. (1998). Strategic facility location: A review. European Journal of Operational Research, 111(3), 423-447. doi: 10.1016/s0377-2217(98)00186-6

Palmer, A. (2007). The development of an integrated routing and carbon dioxide emissions model for goods vehicles. (PhD Thesis), Cranfield University, Bedford - United Kinfgom.

Pati, R. K., Vrat, P., & Kumar, P. (2006). Integrated chain analysis of recycled vis-a-vis wood pulp paper industry: an Indian manufacturer viewpoint. International Journal of Value Chain Management, 1(1), 44-63.

Pati, R. K., Vrat, P., & Kumar, P. (2008). A goal programming model for paper recycling system. Omega, 36(3), 405-417.

Pohlen, T. L., & Farris, M. T. (1992). Reverse Logistics in Plastics Recycling. International Journal of Physical Distribution &

Logistics Management, 22(7), 35-47. doi: doi:10.1108/09600039210022051

Polonsky, M. J. (1994). An introduction to green marketing. Electronic Green Journal, 1(2).

Preuss, L. (2005). Rhetoric and reality of corporate greening: a view from the supply chain management function. Business Strategy and the Environment, 14(2), 123-139. doi: 10.1002/bse.435

Pun, K.-F., Hui, I.-K., Lau, H. C. W., Law, H.-W., & Lewis, W. G. (2002). Development of an EMS planning framework for environmental management practices. International Journal of Quality & Reliability Management, 19(6), 688-709. doi: doi:10.1108/02656710210429573

Quariguasi Frota Neto, J., & Bloemhof, J. (2012). An Analysis of the Eco Efficiency of Remanufactured Personal Computers and Mobile Phones. Production and Operations Management, 21(1), 101-114.

Rahman, S., & Subramanian, N. (2012). Factors for implementing end-of-life computer recycling operations in reverse supply chains. International Journal of Production Economics, 140(1), 239-248. doi: http://dx.doi.org/10.1016/j.ijpe.2011.07.019

Ramanathan, U. (2014). Performance of supply chain collaboration – A simulation study. Expert Systems with Applications, 41(1), 210-220. doi: http://dx.doi.org/10.1016/j.eswa.2013.07.022

Ramanathan, U., & Gunasekaran, A. (2014). Supply chain collaboration: Impact of success in long-term partnerships. International Journal of Production Economics, 147, Part B, 252-259. doi: http://dx.doi.org/10.1016/j.ijpe.2012.06.002

Ramanathan, U., & Muyldermans, L. (2010). Identifying demand factors for promotional planning and forecasting: A case of a soft drink company in the UK. International Journal of Production Economics, 128(2), 538-545.

Ramdas, K., & Spekman, R. E. (2000). Chain or shackles: understanding what drives supply-chain performance. Interfaces, 30(4), 3-21.

Rao, P. (2002). Greening the supply chain: a new initiative in South East Asia. International Journal of Operations & Production Management, 22(6), 632-655. doi: doi:10.1108/01443570210427668

Rao, P., & Holt, D. (2005). Do green supply chains lead to competitiveness and economic performance? International Journal of Operations & Production Management, 25(9), 898-916. doi: doi:10.1108/01443570510613956

Raupp, F. M., Angeli, K. D., Alzamora, G. G., & Maculan, N. (2015). MRP OPTIMIZATION MODEL FOR A PRODUCTION SYSTEM WITH REMANUFACTURING. Pesquisa Operacional, 35(2), 311-328.

Ravi, V., & Shankar, R. (2005). Analysis of interactions among the barriers of reverse logistics. Technological Forecasting and Social Change, 72(8), 1011-1029. doi: http://dx.doi.org/10.1016/j.techfore.2004.07.002

Reefke, H., & Sundaram, D. (2016). Key Themes and Research Opportunities in Sustainable Supply Chain Management – Identification and Evaluation. Omega. doi: http://dx.doi.org/10.1016/j.omega.2016.02.003

Richey Jr, R. G., Musgrove, C. F., Gillison, S. T., & Gabler, C. B. (2014). The effects of environmental focus and program timing on green marketing performance and the moderating role of

resource commitment. Industrial Marketing Management, 43(7), 1246-1257. doi: http://dx.doi.org/10.1016/j.indmarman.2014.06.014

Robotis, A., Bhattacharya, S., & Van Wassenhove, L. N. (2005). The effect of remanufacturing on procurement decisions for resellers in secondary markets. European Journal of Operational Research, 163(3), 688-705.

Rogers, D. S., Lambert, D. M., Croxton, K. L., & García-Dastugue, S. J. (2002). The returns management process. The international journal of logistics management, 13(2), 1-18.

Rogers, D. S., & Tibben-Lembke, R. S. (1999). Going backwards: reverse logistics trends and practices (Vol. 2): Reverse Logistics Executive Council Pittsburgh, PA.

Rogers, D. S., & Tibben, R. S. (1999). Lembke. Going backwards: Reverse logistics trends and practices.

Romeijn, H. E., Shu, J., & Teo, C.-P. (2007). Designing two-echelon supply networks. European Journal of Operational Research, 178(2), 449-462.

Rostamzadeh, R., Govindan, K., Esmaeili, A., & Sabaghi, M. (2015). Application of fuzzy VIKOR for evaluation of green supply chain management practices. Ecological Indicators, 49, 188-203. doi: http://dx.doi.org/10.1016/j.ecolind.2014.09.045

Routroy, S. (2009). Evaluation of supply chain strategies: a case study. International Journal of Business Performance and Supply Chain Modelling, 1(4), 290-306.

Ruiz-Benítez, R., Ketzenberg, M., & van der Laan, E. A. (2014). Managing consumer returns in high clockspeed industries. Omega, 43, 54-63. doi: http://dx.doi.org/10.1016/j.omega.2013.06.004

Ruparathna, R., & Hewage, K. (2015). Sustainable procurement in the Canadian construction industry: current practices, drivers and opportunities. Journal of Cleaner Production. doi: http://dx.doi.org/10.1016/j.jclepro.2015.07.007

Sadok, T., Zied, H., & Nidhal, R. (2015). Performance Evaluation of a Hybrid Manufacturing Remanufacturing System Taking Into Account the Machine Degradation. IFAC-PapersOnLine, 48(3), 2153-2157. doi: http://dx.doi.org/10.1016/j.ifacol.2015.06.407

Sahay, B., Srivastava, S. K., & Srivastava, R. K. (2006). Managing product returns for reverse logistics. International Journal of Physical Distribution & Logistics Management, 36(7), 524-546.

?ahin, G., & Süral, H. (2007). A review of hierarchical facility location models. Computers & Operations Research, 34(8), 2310-2331.

Sahni, S., Boustani, A., Gutowski, T., & Graves, S. (2010). Furniture remanufacturing and energy savings. Sloan Management School, Massachusetts Institute of Technology, Cambridge.

Salema, M., Povoa, A., & Novais, A. (2006). A warehouse-based design model for reverse logistics. Journal of the Operational Research Society, 57(6), 615-629.

Santolaria, M., Oliver-Solà, J., Gasol, C. M., Morales-Pinzón, T., & Rieradevall, J. (2011). Eco-design in innovation driven companies: perception, predictions and the main drivers of integration. The Spanish example. Journal of Cleaner Production, 19(12), 1315-1323. doi: http://dx.doi.org/10.1016/j.jclepro.2011.03.009

Santoso, T., Ahmed, S., Goetschalckx, M., & Shapiro, A. (2005). A stochastic programming approach for supply chain network design under uncertainty. European Journal of Operational Research, 167(1), 96-115. doi: 10.1016/j.ejor.2004.01.046

Saputro, T. E., Masudin, I., & Daneshvar Rouyendegh, B. (2015). A literature review on MHE selection problem: levels, contexts, and approaches. International Journal of Production Research, 53(17), 5139-5152. doi: 10.1080/00207543.2015.1005254

Saridogan, M. (2012). The impact of green supply chain management on transportation cost reduction in Turkey. International Review Management and Marketing, 2(2), 112-121.

Sarkis, J. (2001). Greener manufacturing and operations: from design to delivery and back: Greenleaf Publishing.

Sarkis, J., Darnall, N. M., Nehman, G. I., & Priest, J. W. (1995). The role of supply chain management within the industrial ecosystem. Paper presented at the Electronics and the Environment, 1995. ISEE., Proceedings of the 1995 IEEE International Symposium on.

Sarkis, J., Helms, M. M., & Hervani, A. A. (2010). Reverse logistics and social sustainability. Corporate Social Responsibility and Environmental Management, 17(6), 337-354. doi: 10.1002/csr.220

Sarkis, J., Zhu, Q., & Lai, K.-h. (2011). An organizational theoretic review of green supply chain management literature. International Journal of Production Economics, 130(1), 1-15. doi: http://dx.doi.org/10.1016/j.ijpe.2010.11.010

Sasikumar, P., Kannan, G., & Haq, A. N. (2010). A multi-echelon reverse logistics network design for product recovery—a case of truck tire remanufacturing. The International Journal of Advanced Manufacturing Technology, 49(9-12), 1223-1234.

Schultmann, F., Zumkeller, M., & Rentz, O. (2006). Modeling reverse logistic tasks within closed-loop supply chains: An example from the automotive industry. European Journal of Operational Research, 171(3), 1033-1050.

Schweiger, K., & Sahamie, R. (2013). A hybrid Tabu Search approach for the design of a paper recycling network. Transportation Research Part E: Logistics and Transportation Review, 50, 98-119.

Scott, C., Lundgren, H., & Thompson, P. (2011). Guide to supply chain management: Springer Science & Business Media.

Searcy, C., Morali, O., Karapetrovic, S., Wichuk, K., McCartney, D., McLeod, S., & Fraser, D. (2012). Challenges in implementing a functional ISO 14001 environmental management system. International Journal of Quality & Reliability Management, 29(7), 779-796. doi: doi:10.1108/02656711211258526

Seitz, M. A. (2007). A critical assessment of motives for product recovery: the case of engine remanufacturing. Journal of Cleaner Production, 15(11), 1147-1157.

Seitz, M. A., & Wells, P. E. (2006). Challenging the implementation of corporate sustainability: The case of automotive engine remanufacturing. Business Process Management Journal, 12(6), 822-836. doi: doi:10.1108/14637150610710954

Senthil, S., Srirangacharyulu, B., & Ramesh, A. (2014). A robust hybrid multi-criteria decision making methodology for contractor evaluation and selection in third-party reverse logistics. Expert Systems with Applications, 41(1), 50-58.

Seuring, S., & Müller, M. (2008). From a literature review to a conceptual framework for sustainable supply chain management. Journal of Cleaner Production, 16(15), 1699-1710. doi: http://dx.doi.org/10.1016/j.jclepro.2008.04.020

Sharma, V., Garg, S. K., & Sharma, P. B. (2015). Identification of major drivers and roadblocks for remanufacturing in India. Journal of Cleaner Production. doi: http://dx.doi.org/10.1016/j.jclepro.2014.11.082

Shi, J., Zhang, G., & Sha, J. (2011). Optimal production planning for a multi-product closed loop system with uncertain demand and return. Computers & Operations Research, 38(3), 641-650.

Simatupang, T. M., & Sridharan, R. (2004). A benchmarking scheme for supply chain collaboration. Benchmarking: An International Journal, 11(1), 9-30.

Simchi-Levi, D., Kaminsky, P., & Simchi-Levi, E. (2004). Managing the Supply Chain: The Definitive Guide for the Business Professional. New York: McGraw-Hill.

Simchi-Levi, D., Kaminsky, P., & Simchi-Levi, E. (2008). Designing and Managing the Supply Chain: Concepts, Strategies, and Cases (3 ed.). New York: McGraw-Hill.

Sirisoponsilp, S. (1989). Warehouse location under multiple transportation options. (Doctor of Philosopy Dissertation), University of Maryland.

Škapa, R., & Klapalová, A. (2012). Reverse logistics in Czech companies: increasing interest in performance measurement. Management Research Review, 35(8), 676-692. doi: doi:10.1108/01409171211247686

Skjoett-Larsen, T., Thernøe, C., & Andresen, C. (2003). Supply chain collaboration: Theoretical perspectives and empirical evidence. International Journal of Physical Distribution & Logistics Management, 33(6), 531-549.

Smith, V. M., & Keoleian, G. A. (2004). The Value of Remanufactured Engines: Life?Cycle Environmental and Economic Perspectives. Journal of Industrial Ecology, 8(1?2), 193-221.

Sodhi, M. S., & Reimer, B. (2001). Models for recycling electronics end-of-life products. OR-Spektrum, 23(1), 97-115.

Soto Zuluaga, J. P. (2005). Reverse logistics: models and applications. Department of Economics and Business, Graduate Program in Economics, Management and Finance, Universitat Pompeu Fabra, Tesis Doctoral.

Souza, G. C., Ketzenberg, M. E., & Guide, V. D. R. (2002). Capacitated remanufacturing with service level constraints*. Production and Operations Management, 11(2), 231-248.

Srivastava, S. K. (2007). Green supply-chain management: A state-of-the-art literature review. International Journal of Management Reviews, 9(1), 53-80. doi: 10.1111/j.1468-2370.2007.00202.x

Srivastava, S. K. (2008). Network design for reverse logistics. Omega, 36(4), 535-548.

Starkowsky, J. M., Spicer, R. M., & Riddell, R. (2009). Reverse logistics process: Google Patents.

Stindt, D., & Sahamie, R. (2012). Review of research on closed loop supply chain management in the process industry. Flexible Services and Manufacturing Journal, 26(1), 268-293. doi: 10.1007/s10696-012-9137-4

Stock, J. R., & Mulki, J. P. (2009). Product returns processing: an examination of practices of manufacturers, wholesalers/ distributors, and retailers. Journal of Business Logistics, 30(1), 33-62.

Su, L., Ma, Z., & Yi, X. (2011). Recycling and reuse of solid waste in furniture products [J]. Recyclable Resources and Circular Economy, 2, 014.

Subramoniam, R., Huisingh, D., & Chinnam, R. B. (2009). Remanufacturing for the automotive aftermarket-strategic factors: literature review and future research needs. Journal

of Cleaner Production, 17(13), 1163-1174. doi: http://dx.doi.org/10.1016/j.jclepro.2009.03.004

Tagaras, G., & Zikopoulos, C. (2008). Optimal location and value of timely sorting of used items in a remanufacturing supply chain with multiple collection sites. International Journal of Production Economics, 115(2), 424-432.

Tang, O., & Teunter, R. (2006). Economic lot scheduling problem with returns. Production and Operations Management, 15(4), 488-497.

Tao, J., & Yu, S. (2012). Incorporating Reuse and Remanufacturing in Product Family Planning. In M. Matsumoto, Y. Umeda, K. Masui & S. Fukushige (Eds.), Design for Innovative Value Towards a Sustainable Society: Proceedings of EcoDesign 2011: 7th International Symposium on Environmentally Conscious Design and Inverse Manufacturing (pp. 795-800). Dordrecht: Springer Netherlands.

Teller, C., Kotzab, H., & Grant, D. B. (2012). Improving the execution of supply chain management in organizations. International Journal of Production Economics, 140(2), 713-720. doi: http://dx.doi.org/10.1016/j.ijpe.2011.03.002

Testa, F., Annunziata, E., Iraldo, F., & Frey, M. (2014). Drawbacks and opportunities of green public procurement: an effective tool for sustainable production. Journal of Cleaner Production. doi: http://dx.doi.org/10.1016/j.jclepro.2014.09.092

Teunter, R., Kaparis, K., & Tang, O. (2008). Multi-product economic lot scheduling problem with separate production lines for manufacturing and remanufacturing. European Journal of Operational Research, 191(3), 1241-1253.

Teunter, R. H., & Flapper, S. D. P. (2011). Optimal core acquisition and remanufacturing policies under uncertain core quality

fractions. European Journal of Operational Research, 210(2), 241-248. doi: http://dx.doi.org/10.1016/j.ejor.2010.06.015

Thierry, M., Salomon, M., van Nunen, J., & van Wassenhove, L. (1995). Strategic Issues in Product Recovery Management. California Management Review, 37(2), 114-135.

Thomas, D. J., & Griffin, P. M. (1996). Coordinated supply chain management. European Journal of Operational Research, 94(1), 1-15.

Thomopoulos, N. T. (2016). Reverse Logistics Elements of Manufacturing, Distribution and Logistics: Quantitative Methods for Planning and Control (pp. 263-276). Cham: Springer International Publishing.

Thoo, A. C., Hamid, A., Bakar, A., Rasli, A., & Zhang, D. W. (2014). The moderating effect of enviropreneurship on green supply chain management practices and sustainability performance. Paper presented at the Advanced Materials Research.

Tibben-Lembke, R. S. (1998). The Impact of Reverse Logistics on the Total Cost of Ownership. Journal of Marketing Theory and Practice, 6(4), 51-60. doi: 10.1080/10696679.1998.11501810

Tippayawong, K. Y., Tiwaratreewit, T., & Sopadang, A. (2015). Positive Influence of Green Supply Chain Operations on Thai Electronic Firms' Financial Performance. Procedia Engineering, 118, 683-690. doi: http://dx.doi.org/10.1016/j.proeng.2015.08.503

Tippayawong, N., Chaiya, E., Thanompongchart, P., & Khongkrapan, P. (2015). Sustainable Energy from Biogas Reforming in a Microwave Discharge Reactor. Procedia Engineering, 118, 120-127. doi: http://dx.doi.org/10.1016/j.proeng.2015.08.410

Toktay, L. B., van der Laan, E. A., & de Brito, M. P. (2004). Managing product returns: the role of forecasting: Springer.

Tseng, M.-L., Huang, F.-h., & Chiu, A. S. F. (2012). Performance drivers of green innovation under incomplete information. Procedia - Social and Behavioral Sciences, 40, 234-250. doi: http://dx.doi.org/10.1016/j.sbspro.2012.03.186

Tsoulfas, G. T., Pappis, C. P., & Minner, S. (2002). An environmental analysis of the reverse supply chain of SLI batteries. Resources, Conservation and Recycling, 36(2), 135-154. doi: http://dx.doi.org/10.1016/S0921-3449(02)00016-2

VICS. (2002). CPFR Guidelines, Voluntary Inter-industry Commerce Standards.

Vidal, C. J., & Goetschalckx, M. (1997). Strategic production-distribution models: A critical review with emphasis on global supply chain models. European Journal of Operational Research, 98(1), 1-18. doi: http://dx.doi.org/10.1016/S0377-2217(97)80080-X

Vourch, M., Balannec, B., Chaufer, B., & Dorange, G. (2008). Treatment of dairy industry wastewater by reverse osmosis for water reuse. Desalination, 219(1), 190-202.

Walker, H., Di Sisto, L., & McBain, D. (2008). Drivers and barriers to environmental supply chain management practices: Lessons from the public and private sectors. Journal of Purchasing and Supply Management, 14(1), 69-85. doi: http://dx.doi.org/10.1016/j.pursup.2008.01.007

Wang, P., Li, W., & Kara, S. (2015). Cradle-to-cradle modeling of the future steel flow in China. Resources, Conservation and Recycling. doi: http://dx.doi.org/10.1016/j.resconrec.2015.07.009

Wang, W. (2015). A Decision Method for Returns Logistics Based on the Customer's Behaviour in E-commerce. Procedia Computer Science, 60, 1506-1515.

Wee Kwan Tan, A., & Kumar, A. (2006). A decision-making model for reverse logistics in the computer industry. The international journal of logistics management, 17(3), 331-354.

Williams, E., & Kuehr, R. (2003). Today's Markets for used PCS—and Ways to Enhance them Computers and the Environment: Understanding and Managing their Impacts (pp. 197-209): Springer.

Winter, M., & Knemeyer, A. M. (2013). Exploring the integration of sustainability and supply chain management: Current state and opportunities for future inquiry. International Journal of Physical Distribution & Logistics Management, 43(1), 18-38.

Wisner, D. J., Tan, K., & Keong Leong, G. (2012). Principles of Supply Chain Management: A Balanced Approach, 3rd Edition

Wu, J., & Wirkkala, M. T. (2009). Firms' Motivations for Environmental Overcompliance. Review of Law & Economics, 5(1), 399-433.

Yang, C.-H., Liu, H.-b., Ji, P., & Ma, X. (2015). Optimal acquisition and remanufacturing policies for multi-product remanufacturing systems. Journal of Cleaner Production. doi: http://dx.doi.org/10.1016/j.jclepro.2015.10.057

Yang, C.-H., Wang, J., & Ji, P. (2015). Optimal acquisition policy in remanufacturing under general core quality distributions. International Journal of Production Research, 53(5), 1425-1438.

Yee Phuah, J. S., Fernando, G. J. (2015). Green supply chain integration in automotive industry Information Resources Management Association, 5056-5064.

Zanoni, S., Segerstedt, A., Tang, O., & Mazzoldi, L. (2012). Multi-product economic lot scheduling problem with manufacturing and remanufacturing using a basic period policy. Computers & Industrial Engineering, 62(4), 1025-1033.

Zhang, T., Chu, J., Wang, X., Liu, X., & Cui, P. (2011). Development pattern and enhancing system of automotive components remanufacturing industry in China. Resources, Conservation and Recycling, 55(6), 613-622.

Zhi-hui, W. F.-y. W. (2005). Thought and Strategy on Recycling and Reusing of Furniture Product [J]. China Forest Products Industry, 5, 007.

Zhou, L., Naim, M. M., & Wang, Y. (2007). Soft systems analysis of reverse logistics battery recycling in China. International Journal of Logistics Research and Applications, 10(1), 57-70. doi: 10.1080/13675560600717847

Zhou, X., & Zhou, Y. (2015). Designing a multi-echelon reverse logistics operation and network: A case study of office paper in Beijing. Resources, Conservation and Recycling, 100, 58-69. doi: http://dx.doi.org/10.1016/j.resconrec.2015.04.009

Zhu, Q., Dou, Y., & Sarkis, J. (2010). A portfolio?based analysis for green supplier management using the analytical network process. Supply Chain Management: An International Journal, 15(4), 306-319. doi: doi:10.1108/13598541011054670

Zhu, Q., & Geng, Y. (2013). Drivers and barriers of extended supply chain practices for energy saving and emission reduction among Chinese manufacturers. Journal of Cleaner Production, 40, 6-12. doi: http://dx.doi.org/10.1016/j.jclepro.2010.09.017

Zhu, Q., Geng, Y., Fujita, T., & Hashimoto, S. (2010). Green supply chain management in leading manufacturers: Case studies in Japanese large companies. Management Research Review, 33(4), 380-392. doi: doi:10.1108/01409171011030471

Zhu, Q., & Sarkis, J. (2006). An inter-sectoral comparison of green supply chain management in China: Drivers and practices. Journal of Cleaner Production, 14(5), 472-486. doi: http://dx.doi.org/10.1016/j.jclepro.2005.01.003

Zhu, Q., & Sarkis, J. (2007). The moderating effects of institutional pressures on emergent green supply chain practices and performance. International Journal of Production Research, 45(18-19), 4333-4355. doi: 10.1080/00207540701440345

Zhu, Q., Sarkis, J., & Lai, K.-h. (2008). Green supply chain management implications for "closing the loop". Transportation Research Part E: Logistics and Transportation Review, 44(1), 1-18. doi: http://dx.doi.org/10.1016/j.tre.2006.06.003

Glossary

Logistics : The process of planning, implementing, and controlling procedures for the efficient and effective transportation and storage of goods, includes inbound, outbound, internal and external movements.

Supply Chain Management : Management of material and information flow and coordination with all stakeholders in a supply chain to provide the highest degree of customer satisfaction at the lowest possible cost.

Green Supply Chain : Integrating environmental thinking into supply chain management including product development, procurement, production, distribution and marketing.

Reverse Logistics : Processes of effective planning and controlling related to reuse, remanufacturing, recycling and disposing returned products from reverse flow of forward movement.

Procurement : The process of procuring raw materials which consist of ordering, purchasing and supplying activities that impacts on the next processes on the supply chain.

Manufacturing	:	The processes that creating, converting or value of materials into finished products that meet customer expectation.
Distribution	:	The movement of products throughout the marketplace using transporters along the supply chains.
Customers	:	The recipient of final products which is the most important targeted stakeholders in logistics and supply chain activities.
Returned Products	:	Items that are sent back from customer to previous processes to be reused, recycled or remanufactured.
Environment	:	Today's business factors that affecting organizations in adopting logistics and supply chain strategies.
Demand	:	The market desire, the point of consumption that drives all activities in logistics and supply chain.
Recycling	:	The process of converting disposal materials or products into usable materials or products.
Remanufacturing	:	The processes of taking apart, repairing and restoring returned items/parts so that the products are ready to be used again.
Driving Factors	:	The factors that considered by industries to adopt green supply chain and reverse logistics.

Inbound Logistics : The activities of receiving, transporting, storing, and disseminating incoming goods or material for use in plant or business.

Outbound Logistics : The activities of moving materials/products associated with storing, transporting, and distributing goods from plants or businesses to its customers.

Strategic Process : Top level processes of organisation where strategies made in this level needs a high level of capabilities and has wide and long term implications for organization.

Tactical Process : The processes that define and implement the strategies made by strategic level in middle term horizon.

Operational Process : The processes that define and implement the strategies made by strategic level in short term horizon.

Green Procurement : Consolidative environment consideration in purchasing or procurement activities that starts from planning, purchasing and controlling.

Green Design : Designing physical objects or products considering environmental and sustainable aspects.

Green Manufacturing: A system that integrates product and process design issues that consider environmental aspect with the goal of reducing environmental impacts by optimizing the resources.

Green Marketing : The activities of selling (marketing) of environmentally friendly products and services.

Framework : The basic structure of something or a set of ideas or facts that provide support for something.

Collection : Process of recovering or recapturing amounts consumed by customers to a firm.

Acquisition : Processes that usually by retailers that decides whether the returned products are feasible and profitable to be sent to reverse logistics system.

Recycling Network : System that concerns with recovery of low value of materials from disposition which are processed as the materials along the forward flow of the supply chain.

Remanufacturing Network: Processes that play an important rule of product recovery in which the returned products are restored to the condition of marketable and having quality and good performance as new.

Secondary Market : Also called the aftermarket, is customers other than those to whom a product was originally offered.

Supplier Relationship : Managing the relationship between the organizations and appropriate suppliers in regards to provide better customer responsiveness.

Product Development: Complete processes in bringing new product to market. A good product development should consider customer needs and factors drive the needs of customer for the products.

Return Management : Processes that is not only monitoring and managing the reverse flow of money along the supply chain, but also identify the potential saving from unnecessary costs.

Supply chain execution: Concerning with activities such as material management, manufacturing, ordering and promising delivery and warehousing management.

Supply chain coordination: Concerning with managing SC procurement, manufacturing, warehousing and distribution in order to ensure the optimization of operations, analysis and processes.

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The progress of world wide regulations and law, global completion, the increasing demand from customers in social and environmental considerations and the sustainability issues has forced researchers and industrial practitioners to expand the perspective on beyond logistics and supply chain management concept. Reverse logistics and green supply chain management are such the innovative ideas for researcher to discuss and for industry practitioners to adopt. This book attempts to describe the concept of supply chain management and logistics in traditional system and figure out the progress of green supply chain management and reverse logistics study. The first two chapters of this book overviews the concept of supply chain management in both perspective application of strategic and operational levels based supply chain management's business process and supply chain management elements. The last two chapters of this book give more attention on these areas: green supply chain management and reverse logistics specifically on the previous study has been done by researchers. The overview and review of green supply chain management and reverse logistics in this book would help readers to understand more about the concept of logistics and supply chain management and would give new directions of further research in green supply chain management and reverse logistics.

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